



Drawing on Innovation
CENTRAL WIRE INDUSTRIES

2012 RCRA Corrective Measures Implementation

Status Report

October 2013

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Abbreviations

DCA	1,2-Dichloroethane
DCE	1,1-Dichloroethene
IEPA	Illinois Environmental Protection Agency
MCL	Maximum Contaminant Limit, U.S. EPS groundwater standard
NPDES	National Pollution Discharge Elimination System
PCE	Tetrachloroethene
P&T	Pump & Treat
RCRA	Resource Conservation and Recovery Act of 1976
RFI	Remedial Facility Investigation
TCA	1,1,1-Trichloroethane
TCE	Trichloroethene
ug/L	Micrograms per Liter
VOCs	Volatile Organic Chemicals

1.0 INTRODUCTION

The Central Wire Union Plant (formerly known as Techalloy) is located in Union, Illinois northwest of the intersection of Jefferson and Olson Roads. The plant facility and grounds occupy 5 acres. The company owns the surrounding 38 acres including the plant site. See Figure 1-1 for site location.

Central Wire began operating at this facility in 1960 as Techalloy Company, Inc. Prior to 1960, the property was farm land. Techalloy was acquired by Central Wire in 2005. Since 1960 Techalloy, NOW Central Wire, has been operating as a specialty handler of stainless steel wire products. The finished products are stainless steel wire coils of varying diameters and tensile strengths that are distributed with and without specialty coatings.

Central Wire is operating under an Order on Consent with the U.S. Environmental Protection Agency to operate a groundwater extraction and treatment facility to remove a chlorinated solvent plume from the groundwater downgradient (northwest) of the Central Wire facility.

As part of the Corrective Measures Implementation under RCRA, Central Wire designed, constructed and is operating a groundwater pump and treat system (P&T) to remove volatile organic compounds from the groundwater including an extraction well, a packed tower aerator, piping and a building to house the appurtenant equipment (holding tanks, pumps, meters, electrical systems and the like). Subsequent to the initiation of operations, it was determined that the single extraction well was not capturing the west edge of the chlorinated plume. As a result, Central Wire added a tray aeration system to treat additional groundwater pumped from a new well, extraction well no. 2, located west of extraction well no. 1; see Figure 1-2 for location of all wells pertinent to this Status Report.

To operate this facility, Central Wire applied for and received an NPDES discharge permit from the Illinois Environmental Protection Agency (IEPA) to discharge the treated water to the South Branch of the Kishwaukee River. This system has been in continuous operation since 1995 except for minor shutdowns for maintenance and repair.

This Status Report will cover three topics:

- Performance of the P&T system including influent groundwater concentrations.
- RCRA groundwater monitoring network and residential well sampling.
- Determining the leading edge of the chlorinated plume.

2.0 PERFORMANCE OF THE P&T SYSTEM

The NPDES discharge permit requires reporting of three volatile organic compounds (or VOC's) for which IEPA has specified effluent limitations. These VOC's are trichloroethene (TCE), tetrachloroethene (PCE) and 1,1,1-Trichloroethane (TCA), each with daily maximum limits of 20 ug/L.

Central Wire began sampling the influent groundwater quality in 2007. The influent was sampled at the P&T facility after groundwater extraction from wells no. 1 & 2 were combined. These samples were collected quarterly and were only analyzed for the VOC's for which there were effluent limitations (TCE, PCE and TCA). Figure 2-1 shows the average influent concentrations in ug/L from March 2007 through June 2013.

In June 2009, Central Wire began sampling influent groundwater individually from each well, but again only for the VOC's that had effluent limitations. In March of 2013, Central Wire began analyzing for all VOC's that could be detected by EPA Method 8260B. In the three sampling rounds that have occurred since that time at the two wells (March, June and September 2013), i.e., six possible occurrences of other VOC's, three additional VOC's were found in four of the samples and four VOCs were found in the other two samples. Of those 20 occurrences, there were only two MCL exceedances, both in extraction well no.1 in the June and September 2013 sampling events. DCE was found at 7.3 ug/L in June and at 9.8 ug/L in September. The MCL for DCE is 7 ug/L.

The data and plots for the VOC trends in wells no. 1 & 2 are provided in Figures 2-2 and 2-3. The three VOC concentrations in well no. 1 (TCA, TCE and PCE) have been generally trending downward since March 2011 with the most significant decreases between June and September 2011. While the trends have flattened out since September 2011, they are still trending downward. TCE has dropped from 16 ug/L in September 2011 to 12 ug/L in September 2013; PCE has been below the MCL of 5 ug/L since September 2011; and TCA has never been above the MCL and has dropped from 5.9 ug/L in September 2011 to 4.4 ug/L in September 2013.

The TCA concentrations have always been below the MCL in well no. 2, but had generally been increasing through December 2012 and have been decreasing since then with a slight uptick in September 2013. PCE concentration also had been trending upward (through December 2011) but has leveled off at about 35 ug/L. TCE concentration has generally trended downward since June 2009.

In evaluating the overall performance (efficiency) of the P&T system, the influent concentrations of the VOC's (with effluent limitations) were compared to the corresponding effluent concentrations. In the three 2013 sampling events (in March, June and September), the average influent concentrations were 16, 13, and 24 ug/L for TCE, PCE, and TCA, respectively. The corresponding average effluent concentrations in these three months were 0.74, 0.17 and 0.317 ug/L.. The P&T system achieved removal efficiencies of 95.4%, 98.7% and 98.7%, respectively, for the three VOCs.

When these effluent values are compared to the daily maximum NPDES permit effluent limitation of 20 ug/L for each of the three volatiles, the effluent values are 3.7%, 0.85% and 1.6% of the allowable maximum daily effluent concentrations.

This analysis shows that that the P&T system at Central Wire remains extremely effective 18 years after the P&T system started treating groundwater.

3.0 RCRA GROUNDWATER MONITORING NETWORK AND RESIDENTIAL WELL SAMPLING

The basic RCRA groundwater monitoring network was established with the conduct of the Remedial Facility Investigation (RFI) in 1993 and 1994. In the post- RFI time frame, samples were collected in most wells in 1998 and 2002. In 2003, Central Wire began collecting and analyzing semiannual samples from the RCRA groundwater well monitoring network and they plan to continue this practice in the future.

The original RCRA groundwater monitoring well network has been expanded over time and now includes the following wells.

MW-2	MW-4	MW-5	MW-5D	MW-6
MW-7	MW-8	MW-9	MW-HBR	DGW-1S
DGW-1I	DGW-1D	DGW-2S	DGW-2I	DGW-2D

Where VOC's have exceeded the maximum contaminant levels (MCL's) at any point in the monitoring process for a specific monitoring well, the significant VOC data has been plotted over time and is shown in Attachment 1. Only one of these wells did not exceed the VOC MCL's in any sampling event – DGW-1S. VOC data for that well is shown in Table 3-1.

In analyzing the groundwater from downgradient well nest DGW-1 over the years, it has been noted that some of the plume had migrated beyond the capture zone before the treatment facility was put into operation in the 1995.

As a result, since 2007 Central Wire has been sampling eight residential wells and the well believed to be the closest downgradient well to the leading edge of the chlorinated plume - the South Branch Nursery irrigation well on the northwest side of their property. See Figure 1-2 for the locations of all the wells that have been sampled at Central Wire, including the residential well samples for homes along Non-responsive and one home on Non-responsive.

Note: The Non-responsive well was a shallow well that was sampled up through December 2010. Near that point in time the Non-responsive replaced their sand point well with a drilled and cased well and that well has not been sampled since then. The locations of the Union municipal wells have been included on Figure 1-2 for informational purposes only. Central Wire has not collected any samples from these wells.

The residential wells identified in Figure 1-2 have been sampled to confirm that they have not been impacted by the chlorinated plume. To date (through June 2013), there have been no detections of chlorinated solvents in any of the residential wells or in the South Branch Nursery irrigation well. In addition a relatively new well nest, DGW-2 (constructed in 2010), is being used as the sentinel well. DGW-2, a three well nest with wells completed at 27 feet, 57

feet and 85 feet below ground surface, was sampled in June and December 2011, June and December 2012 and June 2013 to date. There have been no VOC detections in samples collected at this well nest.

Field well stabilization parameters for the June 2013 sampling event are provided in Table 3-2. Samples are generally collected from these wells in June and December and are reported in the Monthly RCRA Corrective Measures Implementation Progress Reports. An analysis of the data trends in the RCRA Monitoring Well Network was provided in the August 2013 Monthly Progress Report and is provided here as a summary for this Status Report. Plots and tables for these wells are provided in Attachment 1.

MW-2 has had sample results that have been below the MCL's for 12 sampling events in a row over five and a half years going back to March 2008 and, thus, is no longer within the chlorinated plume.

MW-4 has exceeded the MCL's for TCE, PCE, 1,1-DCA and total 1,2-DCE in the past, including June of 2009. But since then it has only exceeded the TCE and PCE MCL's except for December 2012 and June 2013 where only the PCE MCL was exceeded.

MW-5 has, in the past, exceeded MCL's for TCA, TCE, PCE and DCE, but in the last 17 sampling events over 8½ years going back to June 2005 has only exceeded the PCE MCL. That concentration has decreased from 90 ug/L in January 2005 to 86 ug/L in June 2013.

MW-5D has exceeded MCL's for TCE and PCE. However, since December 2005 (14 sampling events), only the TCE MCL has been exceeded. It has decreased from 47.5 ug/L in December 2005 to 18 ug/L in June 2013.

MW-6 has gone from 9.9 ug/L in December 2005 to under the MCL at 4.9 ug/L in June 2013.

MW-7 MCL's have been exceeded for TCE, PCE and DCE. The DCE MCL has not been exceeded since June 2003 and in June 2013, only the PCE MCL was exceeded. PCE has gone from a high of 200 ug/L in December 2006 to 46 ug/l in June 2013.

MCL's for TCE and PCE have been exceeded at MW-8. They have come down from highs of 34 ug/L for TCE and 200 ug/l for PCE to 5.5 and 66 ug/L, respectively.

The only MCL exceeded at MW-9 was PCE which was 22 sampling events ago (in April 2002). MW-9 can be considered outside of the chlorinated plume.

The only MCL exceeded at MW-HBR is PCE. It has reduced from a high of 130 ug/L in December 2003 to 50 ug/l in June 2013.

The only other wells that exceeded the MCL's were DGW-1I and DGW-1D (there have been no detections above the MCL's in DGW-1S). DGW-1I has exceeded MCL's for DCE, TCA, TCE, DCA and PCE. The last time the DCA and PCE MCL's were exceeded

was December 2005 and April 2002, respectively. DCE has gone from 6 ug/L in February 1998 up to 120 ug/L in June 2012 and was down to 54 ug/L in June 2013. Likewise TCA has gone from 0 ug/L in February 1998 to 710 ug/L in June of 2012 and was down to 260 ug/L in June 2013. Lastly, TCE has gone from 4 ug/L in February 1998 to 110 ug/L in December 2009 and back down to 39 ug/L in June 2013.

Overall, there is a downward trend in all (near plant) monitoring wells and downgradient well no. 1 (DGW-1S, DGW-1I & DGW-1D). There have been no VOC detections in any of the residential wells nor the South Branch irrigation well since sampling began in 2007. There have been no detections in the sentinel well nest (DGW-2S, DGW-2I & DGW-2D) since sampling began in June 2011.

The Central Wire Union Plant will continue to sample the wells in the RCRA Monitoring Well Network, residential wells along Illinois Route 176, the South Branch Nursery irrigation well and the new sentinel wells, designated as DGW-2S, DGW-2I and DGW-2D on a semiannual basis for VOC's (see Figure 1-2 for the locations of the DGW-1 and DGW-2 well nests). These samples will be collected after the field parameters (dissolved oxygen, conductivity, pH and oxygen reduction potential) have stabilized.

The December 2012 sampling event was conducted on December 10 & 11, 2012. The June 2013 sampling event was conducted on June 10 & 11, 2013.

Central Wire has updated the potentiometric surface map of the groundwater elevations across the chlorinated plume downgradient (northwest) of the plant site based on water elevations collected in June 2013. This has been provided in Figure 3-1.

4.0 DETERMINING THE LEADING EDGE OF THE CHLORINATED PLUME

Central Wire has been identifying the leading edge of the chlorinated plume northwest of the Union Plant on essentially an annual basis since 2007 in order to assure that the residential wells downgradient of the plume are protected. The leading edge of the chlorinated plume is on the South Branch Nursery property about 800 feet southeast of the South Branch Nursery irrigation well and about 1,000 feet from the nearest residential well.

Groundwater transport modeling conducted in 2007 and 2008 predicted that the chlorinated solvents in the plume would degrade before reaching residential wells. While Central Wire found no chlorinated compounds above EPA's Maximum Contaminant Limits (MCL's) at what Central Wire estimated was the leading edge of the plume in 2011 at GP-18 (see Figure 4-1), the company wanted to ensure that it took all reasonable actions to protect the residential drinking water supply for the residences along Illinois Route 176 downgradient from the chlorinated plume and as a result undertook the 2012 Geoprobe sampling event to again define the leading edge of the chlorinated plume.

Based on previously calculated rates of plume movement (approximately 125 to 130 feet per year) and assuming GP-18 is at the leading edge of the plume, it is estimated that it would take six years ($830^1 \text{ ft}/130 \text{ ft/yr} = 6.4 \text{ yrs}$) until it reached the South Branch Nursery irrigation well; up to 8 years before reaching the well at the home Non-responsive and 10 years before it reached the closest residential well on the north side of Route 176 (Logothetti) ($1330 \text{ ft}/130 \text{ ft} = 10.23$).

4.1 2012 RCRA CORRECTIVE MEASURES IMPLEMENTATION FIELD INVESTIGATION

The goal of the 2012 RCRA Corrective Measures Implementation Field Investigation was to identify the leading edge of the chlorinated plume.

The objectives of the 2012 field investigation were to:

- a) Assure Central Wire, U.S.EPA, local residents and any additional stakeholders that the public is being protected, i.e., chlorinated VOC compounds are not reaching the drinking water wells downgradient of the chlorinated plume, and
- b) Learn more about the characteristics of the aquifer and the interaction of the plume with the environment by collecting additional data that is outlined below.

The 2012 CMI Field Investigation Work Plan was approved by U.S. EPA in October 2012. The Field Investigation was initiated on October 15, 2012 and was completed on October 18, 2012. The Field Investigation included the following tasks:

- a) Perform groundwater sampling to locate the leading edge of the chlorinated solvent plume. This was done using direct push technology to collect samples on the South Branch Nursery property as was done in 2007, 2008, 2009 and 2011 to

locate the leading edge of the chlorinated plume. Central Wire secured permission from Goodmark Industries, the owner of the South Branch Nursery, for the 2012 Field Investigation. See Figure 4-1 for the Geoprobe locations.

In 2012, as in past years, samples were collected at three depths at each of eight Geoprobe locations - at 27 feet, 57 feet and 85 feet deep. At two 85 feet deep locations (GP-17 and GP-19) silt clogged the bladder pump. At these two locations the Geoprobe stems were raised to 80 feet so samples could be collected.

This field investigation included two sample locations that Central Wire believed would be at the leading edge of the chlorinated plume: GP-18 and GP-22. There were only minor amounts of the chemicals of concern in GP-8S in 2011. The chemicals of concern are trichloroethene (TCE), perchloroethene (PCE) and their degradation products. Central Wire also collected samples at the same locations that Geoprobe samples were collected in the 2009/2010 and 2011 Field Investigations. These locations included GP-3, GP-8, GP-16, GP-17, GP-19 and GP-20 (see Figure 4-1). GP-16 to GP-20 were resampled again since there was no to minimal detections (and none above groundwater Maximum Contaminant Limits) at these locations in the 2009/2010 or the 2011 investigations.

All samples were collected using standard low flow sample collection techniques following ASTM D6771 "Standard Practice for Low-Flow Purging and Sampling". Irrigation and residential wells were sampled by purging three water column volumes from the well prior to sampling. Field parameters were collected by using a YSI 556 sonde water quality monitoring device. The sample analytical results are provided in Table 4-1. The 2012 well stabilization data for all Geoprobe locations are provided in Table 4-2.

- b) Central Wire personnel have been attempting to correlate the Central Sod irrigation well pumping to the water levels in this well cluster by monitoring and logging the hours pumped each week by the irrigation wells on the Central Sod property and comparing this pumping to the water levels recorded every 15 minutes in DGW-2I with a data logger. Central Wire has also been comparing the groundwater elevations to local precipitation as reported by the National Weather Service at Marengo, IL. This has been evaluated for three growing seasons and the variability in the elevation of the groundwater table seems to be directly tied to the amount of precipitation in the area and does not seem to be impacted by the Central Sod irrigation wells. Recently, Central Wire has started plotting the groundwater elevations from the data logger in DGW-2I as a part of the RCRA Monthly Progress Report and adding to the x-axis the approximate date and quantity of rainfall events and the hours the Central Sod irrigation wells were pumped. An example of that plot for September 2013 is provided as Figure 4-3.

All samples in the 2012 RCRA CMI Field Investigation that were collected from fixed and temporary wells were collected using low flow sample collection techniques following ASTM D6771 "Standard Practice for Low-Flow Purging and Sampling". Irrigation and residential wells will be sampled by purging three water column volumes from the well prior to sampling. Field parameters were collected by using a YSI 556 sonde and display water quality monitoring device.

All samples were analyzed for volatile organic compounds by EPA Method 8260B. Geoprobe equipment was provided by Geoserve, Inc., Woodstock, IL. Geoprobe samples were collected by Autumnwood ESH Consultants, LLC. Residential and monitoring well samples have been and will be collected by Cabeno Environmental Field Services, LLC. All samples were analyzed by Test America Laboratories, Inc. in University Park, IL.

4.2 FIELD INVESTIGATION RESULTS

All of the analytical data from the 2012 RCRA Corrective Measures Implementation Field Investigation are provided in Table 4-1. Three samples each from GP-18 and GP-22, at the depths noted above, were collected on the first day of sampling, October 15, 2012. These six samples were picked up, along with a trip blank by Test America for one day analytical turn around to determine if Central Wire had located the leading edge of the chlorinated solvent plume. There were **no detections of the chemical of concern above the MCL's** at any of the six samples analyzed from the two Geoprobe locations. An equipment decontamination (field) blank was also collected on the first day of sampling.

The detections observed in these two samples included only estimated values of toluene ranging from 0.17 to 0.40 ug/L in five of the six samples. There were no other detections or estimated values detected at GP-18. Toluene is not a chemical of concern at this site and will not be discussed in this report.

Acetone was found in GP-22D at 6 ug/L. There is no MCL for acetone. Acetone is also not a chemical used at the plant. Acetone is not a chemical of concern at this site and will not be discussed in this report.

Other detections at GP-22 included 1,1,1-TCA at 7.9 ug/L and TCE at 2.1 ug/L.

At the historical sampling location GP-3, chemicals of concern were found including 1,1-Dichloroethene (DCE) and Trichloroethene (TCE) at all three levels of sample collection. All of the three values found for DCE and TCE were above the MCL (7 ug/L for DCE and 5 ug/L for TCE) except the shallow sample for GP-3S for DCE. In addition, total 1,2-DCE; 1,1-Dichloroethane (DCA), 1,1,1-Trichloroethane (TCA) and 1,1,2-TCA were found in at least one of the three samples at this location. The TCA at the 57 foot location exceeded the MCL, it was found at 210 ug/L.

In the other historical sampling location, GP-8, chemicals of concern found at the 27 foot

sampling depth included 1,1-DCE, 1,1,1-TCA, and TCE. The MCL for TCE was exceeded, 11 ug/L was found at this location. The 85 foot sample detections were found for 1,1-DCA which was footnoted as an estimated value (J noted).

In the four other sampling locations that repeated the locations from the 2009 and 2011 field investigation (GP-16, GP-17, GP-19 & GP-20), **no MCL's were exceeded.**

There were no detections of the chemicals of concern at any of the three samples at GP-16.

There were no detections of the chemicals of concern at any of the three samples at GP-17.

In the three GP-19 samples, the only chemicals of concern detected were 1,1-DCE, total 1,2-DCE, 1,1,1-TCA and TCE.

In the GP-20 samples, vinyl chloride, chloroethane, 1,1-DCE; total 1,2-DCE and 1,1-DCA were detected. Only the detections for 1,1-DCE, total 1,2-DCE, and 1,1-DCA in the intermediate and deep samples were not estimated values and all were below the MCL's. This seems to indicate that the VOC are migrating to lower areas in the aquifer.

Data and plots of sampling locations where VOC's exceeded MCL's are provided in Figure 4-2. These locations are at GP 3S, GP-3I, GP-3D and GP8-S. At GP-3S concentrations of TCE and 1,1-DCE have fallen off since 2011. At GP-3I TCE and 1,1,1-TCA increased from 2011 to 2012 and at GP-3D TCE and 1,1 DCE have increased from 2009 to 2012. At GP-8S TCE was elevated (8.2 ug/L) in 2009, then went to non-detectable in 2011 and increased to 11 ug/L in 2012.

Two trip blank and four equipment decontamination (field) blanks were submitted for analysis, one field blank for each day of sampling as stated in the Work Plan. There were no detections in any of these samples (see Table 4-1).

Central Wire has further evaluated this data by plotting a fence diagram across the leading edge of the plume by plotting the concentrations found over depth in GP-16, GP-17, GP-18, GP-19 and GP-20. The was repeater for the following cross sections: GP-16 - GP-17 - **GP-3** - GP-19 - GP-20; GP-16 - GP-17 - **GP-8** - GP-19 - GP-20 and GP-16 - GP-17 - **GP-22** - GP-19 - GP-20 (see Figures 4-3A and 4-3B).

At the 27 ft. depth, there has been a significant fall off of contamination moving away from the leading edge of the plume in all chemicals of concern going from GP-3 to GP-8 tp GP-18 to GP-22. There was a slight increase in TCA, though it was well below the MCL.

At the 57 ft. and the 85 ft. depth there is a significant fall off all parameters from GP-3I to GP-8I with basically no contaminants found in GP-18I or GP-22I.

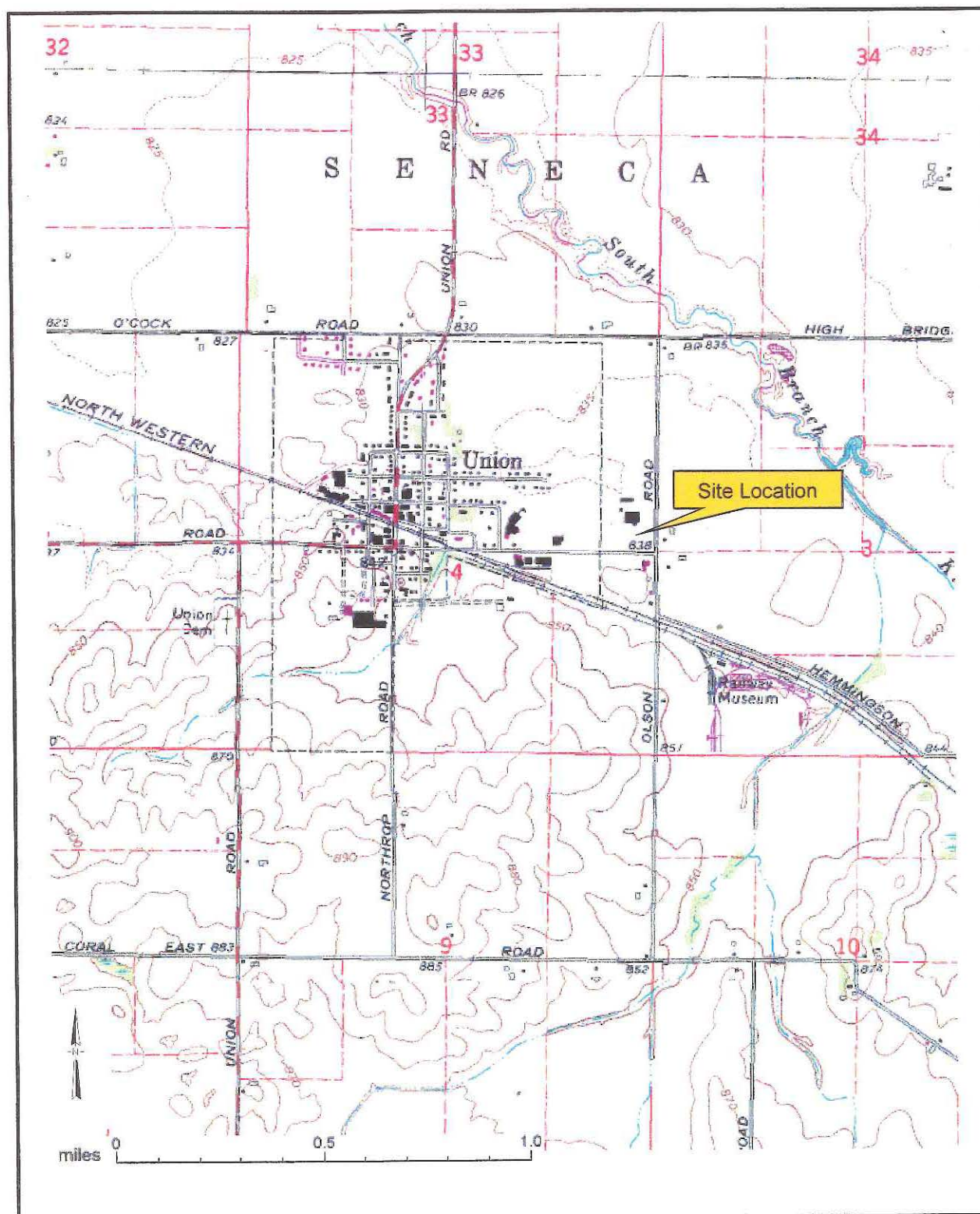
Based on the data and the plots provided particularly where there are the higher levels of VOC detection in GP-3, it appears that the contamination is moving to lower parts of the aquifer since the VOC's are general decreasing in GP-3S and increasing in both GP-3I and GP-3D.

The plume appears to be moving in a more northerly direction based on detections in GP-19 and GP 20. While all of the detections were well below the MCL's (and many were detected below the quantitation limit and were therefore estimated values (identified as "J" values)), TCE was close to the MCL in GP-19 and four parameters increased from 2011 to 2012 in GP-20.

4.3 CONCLUSION

It is Central Wire's conclusion that the plume, while appearing to be migrating downward within its footprint, also appears to be relatively stable. The band of sampling points represented by GP-16 through GP-20 and GP-22 are at the leading edge of the chlorinated plume containing the chemicals of concern where MCL's are not exceeded. As requested by U.S. EPA, Figure 4-1 represents Central Wire's interpretation of the data regarding the location of the leading edge of the chlorinated plume where MCL's are not exceeded.

FIGURES



Source: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC MAPS.
MARENGO SOUTH, ILLINOIS QUADRANGLE

Figure I-1



Autumnwood ESH Consultants, LLC
Mount Pleasant, Wisconsin

Site Location Map
Central Wire
Union, Illinois Facility

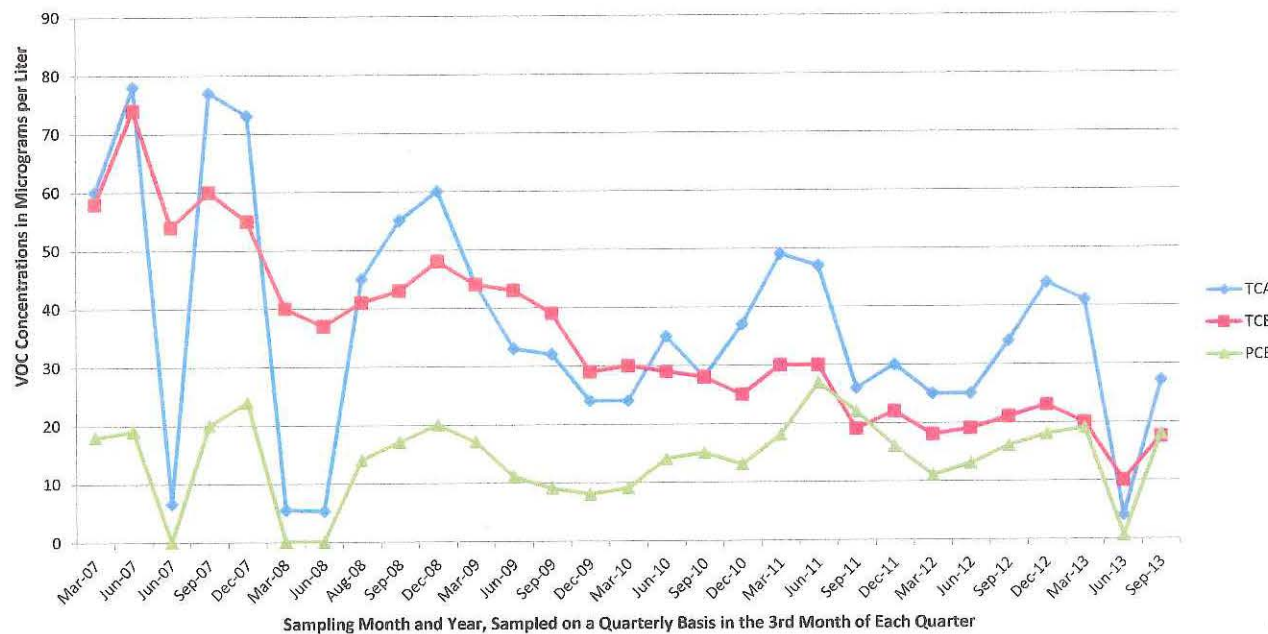
Non-responsive

Average P&T Influent Concentrations, ug/L

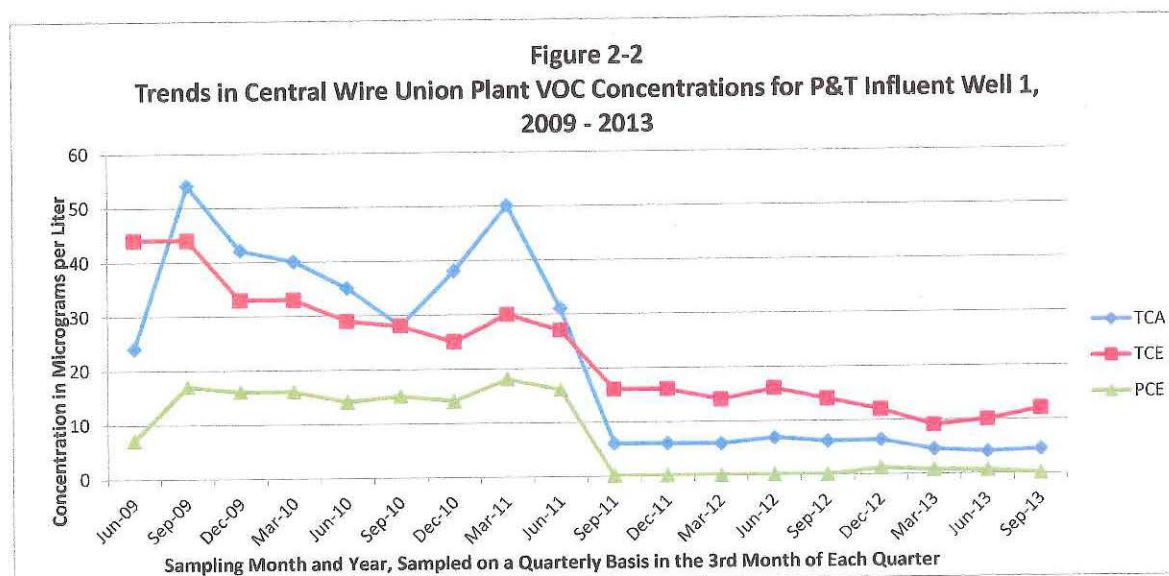
	TCA	TCE	PCE
Mar-07	60	58	18
Jun-07	78	74	19
Jun-07	7	54	0
Sep-07	77	60	20
Dec-07	73	55	24
Mar-08	6	40	0
Jun-08	5	37	0
Aug-08	45	41	14
Sep-08	55	43	17
Dec-08	60	48	20
Mar-09	44	44	17
Jun-09	33	43	11
Sep-09	32	39	9
Dec-09	24	29	8
Mar-10	24	30	9
Jun-10	35	29	14
Sep-10	28	28	15
Dec-10	37	25	13
Mar-11	49	30	18
Jun-11	47	30	27
Sep-11	26	19	22
Dec-11	30	22	16
Mar-12	25	18	11
Jun-12	25	19	13
Sep-12	34	21	16
Dec-12	44	23	18
Mar-13	41	20	19
Jun-13	4	10	0.60
Sep-13	27.2	17.5	18
MCL	200	5	5

MCL = Maximum Contaminant Limit
Values above the MCL are in **bold**

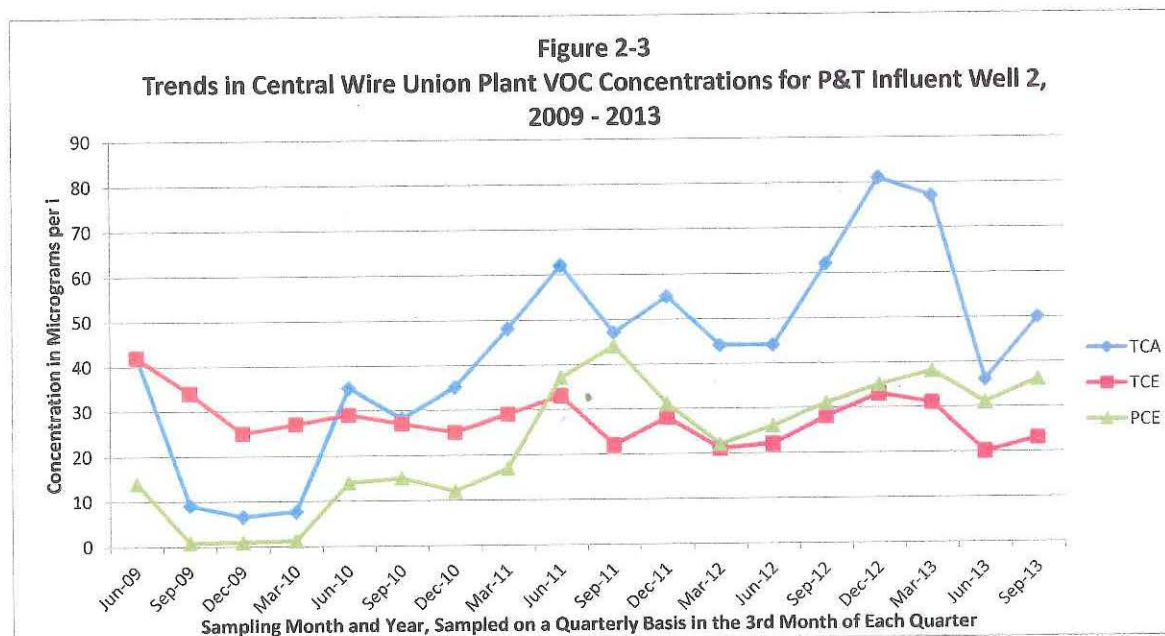
Figure 2-1
Average Central Wire Union Plant VOC Concentrations for P&T Influent, 2007 - 2013



Well 1 VOC Concentrations, ug/L			
	TCA	TCE	PCE
Jun-09	24	44	7.1
Sep-09	54	44	17
Dec-09	42	33	16
Mar-10	40	33	16
Jun-10	35	29	14
Sep-10	28	28	15
Dec-10	38	25	14
Mar-11	50	30	18
Jun-11	31	27	16
Sep-11	5.9	16	0
Dec-11	5.87	16	0
Mar-12	5.8	14	0
Jun-12	6.8	16	0
Sep-12	6.1	14	0
Dec-12	6.3	12	1.1
Mar-13	4.5	9	0.72
Jun-13	4	10	0.6
Sep-13	4.4	12	<0.17
MCL	200	5	5



Well 2 VOC Concentrations, ug/L			
	TCA	TCE	PCE
Jun-09	42	42	14
Sep-09	9	34	0.78
Dec-09	6.5	25	0.87
Mar-10	7.6	27	1.2
Jun-10	35	29	14
Sep-10	28	27	15
Dec-10	35	25	12
Mar-11	48	29	17
Jun-11	62	33	37
Sep-11	47	22	44
Dec-11	55	28	31
Mar-12	44	21	22
Jun-12	44	22	26
Sep-12	62	28	31
Dec-12	81	33	35
Mar-13	77	31	38
Jun-13	36	20	31
Sep-13	50	23	36
MCL	200	5	5



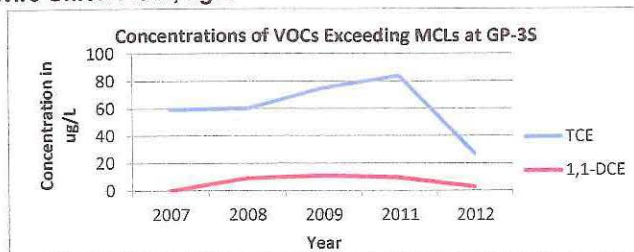
MCL = Maximum Contaminant Limit
Values above the MCL are in **bold**

Non-responsive

Figure 4-2
Data and Plots of Geoprobe Wells Exceeding MCLs from 2007 to 2012
Central Wire Union Plant, ug/L

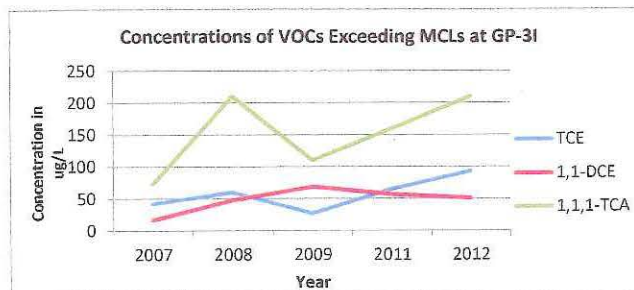
GP-3S

	2007	2008	2009	2011	2012
TCE	59	60	75	84	27
1,1-DCE	0	9.1	11	9.7	3.1



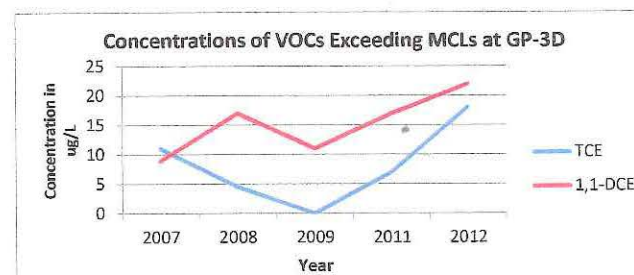
GP-3I

	2007	2008	2009	2011	2012
TCE	42	60	27	65	93
1,1-DCE	17	48	69	57	51
1,1,1-TCA	73	210	110	160	210



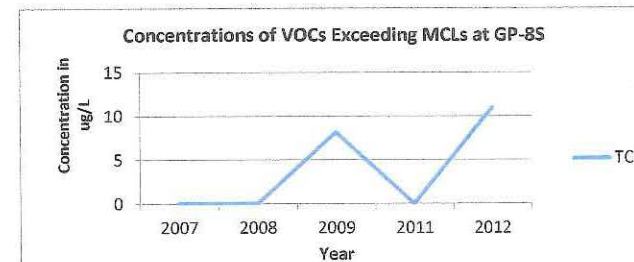
GP-3D

	2007	2008	2009	2011	2012
TCE	11	4.5	0	7	18
1,1-DCE	8.9	17	11	17	22



GP-8S

	2007	2008	2009	2011	2012
TCE	-	0	8.2	0	11



Bold = exceeds MCL
 - = element not sampled for during this round
 Values = Concentration in ug/L

LEGEND

- GeoProbe Locations
- Down Gradient Well Locations
- Cross Sections
- Water Level
- Potentialmetric Surface
- Assumed Potentialmetric Surface
- 0.73 - Maximum Contaminant Level Exceedance
- 97.05 - Total Chlorinated Solvents
- ND = Non-Detect
- TCE = Trichloroethene
- 11DCE = 1,1 Dichloroethene
- 12DCE = 1,2 Dichloroethene
- 11DCA = 1,1 Dichloroethane
- 111TCA = 1,1,1 Trichloroethane
- 112TCA = 1,1,2 Trichloroethane
- VC = Vinyl Chloride

Notes:

- Concentrations Reported in mg/L
- Distances Reported in Feet unless otherwise specified
- Elevations Reported in Feet Above Mean Sea Level Unless otherwise specified
- Offsets equal Perpendicular Distance and direction from Specified Cross Section
- Sand and Gravel Aquifer



General Notes



No.	Revision/Issue	Date

Firm Name and Address



Autumnwood ESH Consultants
Mount Pleasant, Wisconsin

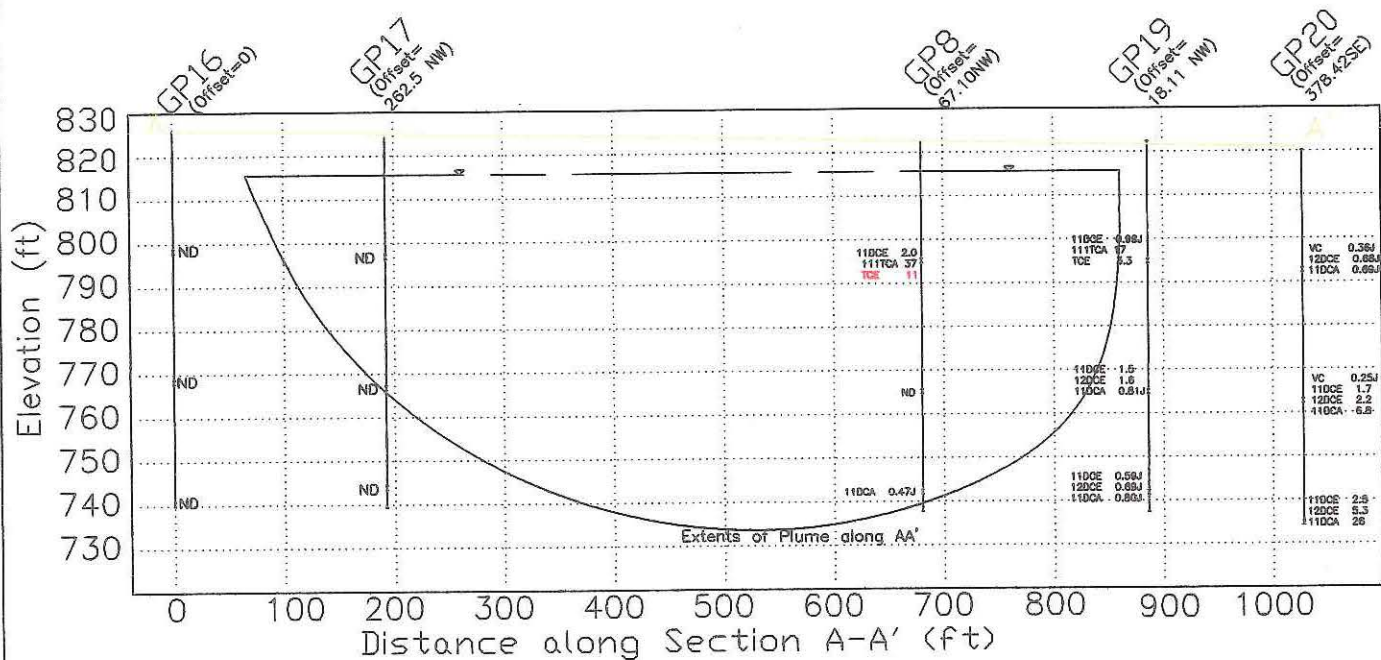
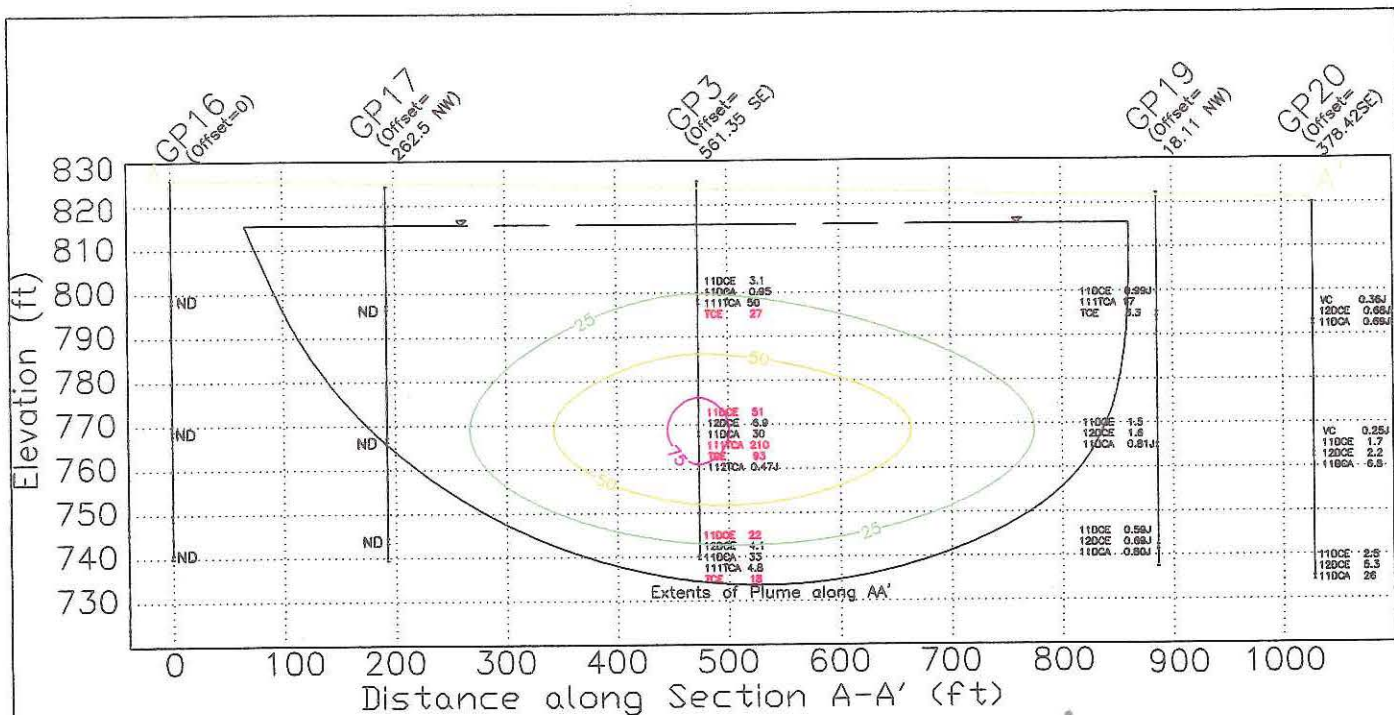
Project Name and Address



6509 Olsen Rd.
Union, IL. 60180

Project	Sheet
Central Wire	Figure 4-3
Date	10/21/2013
Scale	1" = 400'

Legend and Plan
View for Cross
Sectional Fence
Diagrams of the
Chlorinated Plume
1 of 3



Note: Isopleths Reported in TCE
GP-17 and GP-19 sampled at 80 ft. bgs

Autumnwood ESH Consultants
Mount Pleasant,
Wisconsin



Drawing on Innovation
CENTRAL WIRE INDUSTRIES

Central Wire Company
6509 Olsen Rd.
Union, IL 60180

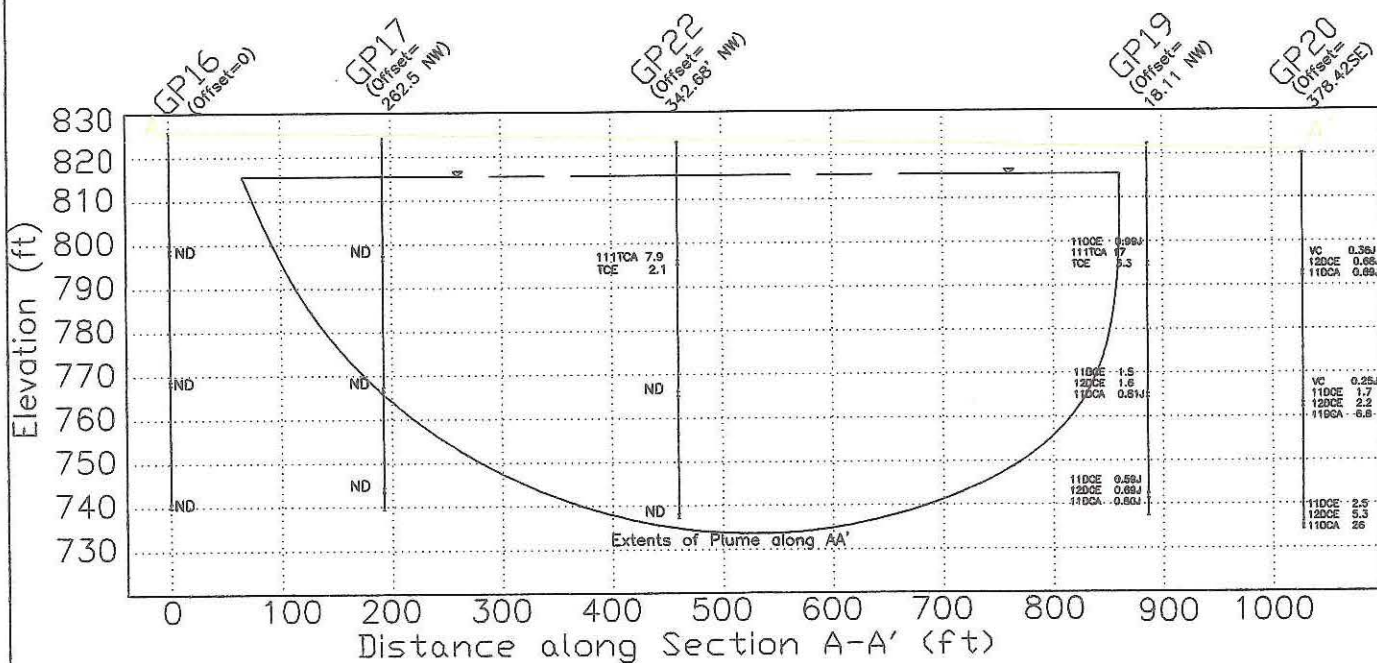
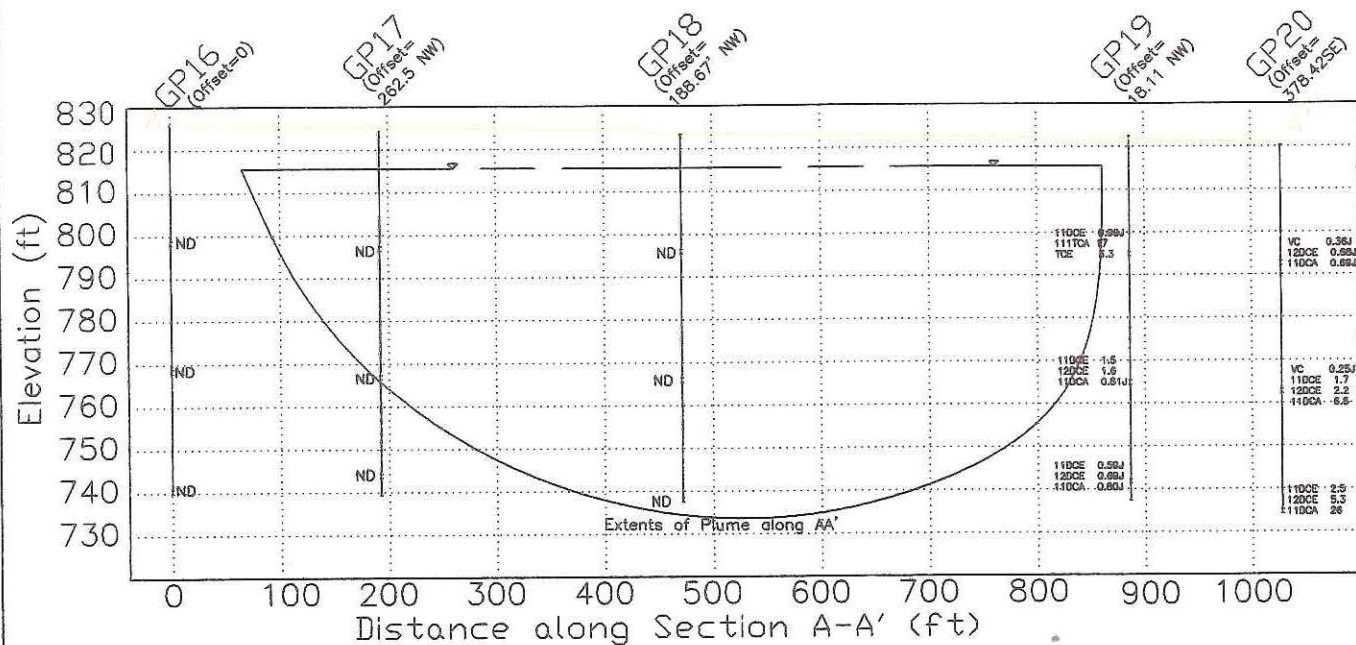
SIZE Date:
10/21/2013

4-3A Fence Diagram of Groundwater Samples
Collected at the Leading Edge of the Chlorinated
Plume

SCALE

Drawn By: SFG

SHEET 2 of 3



Note: Isopleths Reported in TCE
 GP-17 and GP-19 sampled at 80 ft. bgs



Autumnwood ESH Consultants
 Mount Pleasant,
 Wisconsin



Drawing on Innovation
 CENTRAL WIRE INDUSTRIES

Central Wire Company
 6509 Olsen Rd.
 Union, IL. 60180

SIZE Date:
 10/21/2013

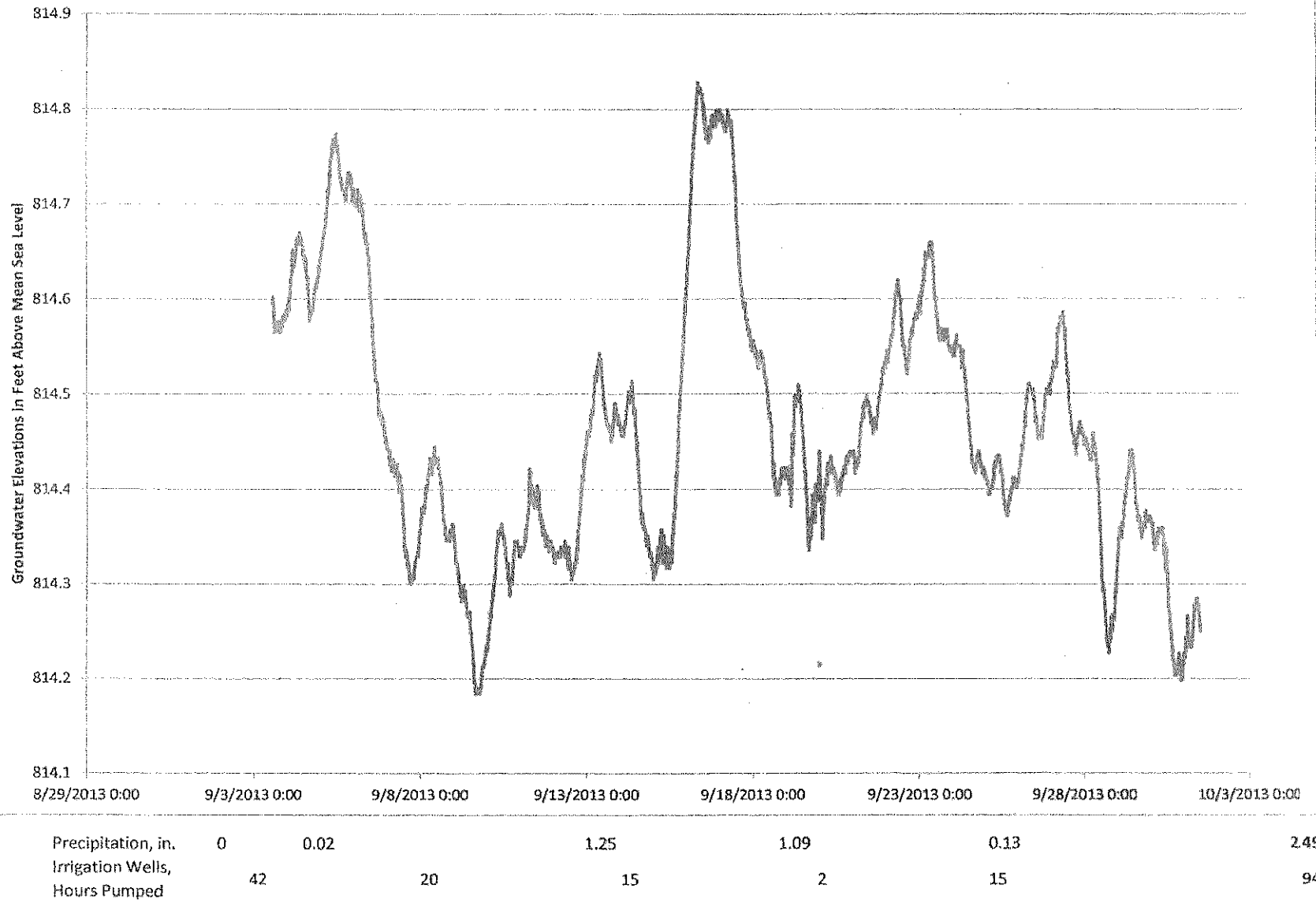
4-3B Fence Diagram of Groundwater Samples
 Collected at the Leading Edge of the Chlorinated
 Plume

SCALE

Drawn By: SFG

SHEET 3 of 3

Figure 4-4
Groundwater Elevations in DGW-2I, September 2013



TABLES

Table 3-1
Historical Data from Monitoring Well DGW-1S

Time	1,1-DCE	1,2-DCE	TCE	PCE	TCA
February-98	0	0	0.6	0	0
April-02	0	0	0	1.9	1.2
June-05	0	0	1	0	2.2
December-05	0	0	0	0	1.39
June-06	0	0	0	0	1.2
December-06	0	0	1	0	1.3
June-07	0	0	0	0	1.1
September-07	0	0	0	0	1.4
December-07	0	0	2.1	0	1.8
March-08	0	0	1	0	2.5
June-08	0	0	0	0	1.8
October-08	0	0	0	0	2.4
June-09	3.4	0	1.1	0	3.7
December-09	0	0	1.7	0	5.2
June-10	0	0	0	0	0
December-10	0	0	1.1	0	3.4
June-11	0	0	1	0	3.5
December-11	0	0	1	0.72	3.4
June-12	0.56	0	1.2	0.6	0
December-12	0	0	0.76	0	3.1
June-13	1.1	0	1.9	0	5.2
MCL	7	5	5	2	200

Concentrations reported in micrograms per liter.

Bold values exceed the MCL.

EPA Method 8260B was run. Only chemicals with detections above the MCLs were plotted.

Table 3-2
Central Wire Union Plant 6-10-13 Field Information

Well	pH	Temp.	Cond	D.O.	Time		Water Level	Well depth
MW-4	7.68	64.6	255	6	7:55		5.36	11.19
	7.44	62.8	246	1.7	8:00			
	7.17	62.3	376	1.3	8:05			
	7.04	62.1	526	2.6	8:10			
	7.05	62	555	3.2	8:15			
	7.14	61.8	569	3.8	8:20			
Sampled	7.12	61.9	573	3.7	8:25			
MW-6	8.17	53.1	389	2.5	9:15		6.93	26.89
	7.4	51.3	375	0.37	9:20			
	6.93	51	373	0.3	9:25			
	7.04	51.6	374	0.3	9:30			
	7.19	51.2	374	0.34	9:35			
	7.3	51.2	374	0.45	9:40			
Sampled	7.27	51.1	375	0.52	9:45			
MW-5	7.85	56.2	457	11.2	10:00		7.48	38.35
	7.35	52.2	456	5.3	10:05			
	7.15	52.4	454	5.1	10:10			
	7.59	52.3	454	12	10:15			
	7.22	52.4	453	5.2	10:20			
	7.33	52.7	454	5.1	10:25			
	7.39	52.9	455	5.2	10:30			
	7.41	53.2	456	5.3	10:35			
Sampled	7.45	53.3	457	5.4	10:40			
MW-5D	7.8	60.8	282	10.2	10:55		7.55	86.3
	7.3	54.3	487	1.2	11:00			
	7.3	54.4	487	1.2	11:05			
	7.34	54.3	532	1.2	11:10			
	7.35	54.3	487	1.2	11:15			
Sampled	7.37	54.5	486	1.2	11:20			
MW-7	7.99	57.5	309	12.6	11:40		7.76	26.95
	7.09	52.6	602	0.33	11:45			
	7.15	52.6	600	0.86	11:50			
	7.23	52.7	613	0.67	11:55			
	7.3	52.9	620	0.64	12:00			
	7.28	52.7	621	0.58	12:05			
Sampled	7.24	52.7	621	0.5	12:10			
MW-8	7.93	55.1	569	2.8	12:30		7.03	27.18
	7.34	55.1	605	0.8	12:35			
	7.25	55.4	620	0.6	12:40			
	7.32	55.3	619	0.5	12:45			
	7.37	55.2	618	0.5	12:50			
	7.41	55.3	619	0.5	12:55			
Sampled	7.39	53.3	691	0.23	13:00			
MW-9	8.05	61.8	308	12.2	13:20		7.28	27.19
	8.66	54.8	503	1.1	13:25			

	8.14	54.8	503	0.82	13:30		
	7.66	55.1	505	0.35	13:35		
	7.49	54.2	499	0.44	13:40		
	7.59	54.6	502	0.54	13:45		
Sampled	7.6	54.5	501	0.58	13:50		

MW-2	8.59	58.4	149	10.9	16:15	7.73	14.6
	8.61	53.1	238	0.71	16:20		
	8.02	52.2	231	1.01	16:25		
	7.65	52	231	1.3	16:30		
	7.39	51.4	229	1.5	16:35		
	7.33	51.2	228	1.6	16:40		
	7.66	51.5	229	1.6	16:45		
Sampled	7.7	51.6	229	1.6	16:50		

HBR	8.17	60.7	290	15.9	14:45	10.18	27.53
	7.32	50.8	474	7.3	14:50		
	7.16	50.5	477	6.9	14:55		
	7.2	50.4	477	6.8	15:00		
	7.22	50.3	477	6.8	15:05		
	7.26	50	477	7	15:10		
	7.18	49.8	477	7	15:20		
	7.25	49.9	478	7	15:25		
	7.35	50	481	7.1	15:30		
	7.42	50	483	6.9	15:35		
	7.78	49.4	489	7.5	15:40		
	7.37	49.4	489	7.4	15:45		
Sampled	7.35	49.4	489	7.1	15:50		

6/11/2013

DGW-1D	7.55	56	733	3.7	7:05	12.02	82.35
	6.87	54.1	711	2.1	7:15		
	6.84	54	711	1	7:20		
	7.14	54.4	714	0.75	7:25		
	7.24	54.5	716	0.83	7:30		
	7.3	54.6	716	0.67	7:35		
Sampled	7.32	54.7	717	0.53	7:40		

DGW-1I	7.53	59.4	769	2	7:50	12.11	57.6
	7.38	56.5	681	2.3	7:55		
	7.258	56.3	661	1.4	8:00		
	7.32	56.2	656	1.5	8:05		
	7.34	56.3	657	1.8	8:10		
Sampled	7.35	56.3	656	1.7	8:15		

DGW-1S	7.57	63.6	655	6.2	8:30	11.95	27.45
	7.49	62.7	605	7.7	8:35		
	7.46	62.6	593	7.9	8:40		
	7.46	62.7	590	8.1	8:45		
Sampled	7.45	62.4	586	8	8:50		

Non-responsive	8.54	58.6	849		13:25		
	7.44	61.2	947.1		12:05		
	7.74	57.3	847		11:55		
	Not Home						

Non-responsive	7.76	56.1	1122		12:15
	7.81	55.1	687.3		12:50
	7.75	54.9	1196		13:10
	7.82	56.2	767		13:15

DGW-2S	7.86	66.6	472	8.71	10:50		5.58	26.82
	7.62	63.2	443	7.93	10:55			
	7.58	64.2	446	7.69	11:00			
	7.49	62.9	437	8.12	11:05			
	7.67	65.6	453	8.2	11:10			
	7.69	66.5	459	7.9	11:15			
	7.56	62.4	439	8.4	11:20			
Sampled	7.54	62.7	437	8.23	11:25			

DGW-2I	7.56	60.1	280	14.2	10:15		5.82	56.82
	7.12	54.8	523	0.42	10:20			
	7.12	54.9	525	0.32	10:25			
Sampled	7.12	54.9	525	0.3	10:30			

DGW-2D	7.96	57.3	409	10.7	9:40		5.09	56.82
	7.09	54.9	277	0.86	9:45			
	7.07	54.7	278	0.8	9:50			
	7	55.4	258	0.59	9:55			
	7.11	54.9	254	0.53	10:00			
Sampled	7.11	54.7	252	0.46	10:05			

Table 4-1
October 2012 RCRA CMI Field Investigation
Geoprobe Sampling Results

				Monitoring Location	GP-3S	GP-3I	GP-3D	GP-8S	GP-8I	GP-8D	GP-16S	GP-16I	GP-16D	GP-17S	GP-17I	GP-17D
				Laboratory ID:												
				Sampling Date:	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12
Parameter	Method	Units	MCL													
Vinyl Chloride	8260B	mg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	8260B	mg/L	***	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	8260B	mg/L	7	3.1	51	22	2.0	-	-	-	-	-	-	-	-	-
total 1,2-Dichloroethene	8260B	mg/L	170	-	6.9	4.1	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	8260B	mg/L	800**	0.95	30	33	-	-	0.47 J	-	-	-	-	-	-	-
1,1,1-Trichloroethane	8260B	mg/L	200	50	210	4.8	37	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	8260B	mg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	8260B	mg/L	5	27	93	18	11	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	8260B	mg/L	5	-	0.47 J	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	8260B	mg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-

				Monitoring Location	GP-18S	GP-18I	GP-18D	GP-19S	GP-19I	GP-19D	GP-20S	GP-20I	GP-20D	GP-22S	GP-22I	GP-22D
				Laboratory ID:												
				Sampling Date:	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12	O-12
Parameter	Method	Units	MCL													
Vinyl Chloride	8260B	mg/L	2	-	-	-	-	-	-	-	0.36 J	0.25 J	-	-	-	-
Chloroethane	8260B	mg/L	***	-	-	-	-	-	-	-	0.77 J	0.64 J	-	-	-	-
1,1-Dichloroethene	8260B	mg/L	7	-	-	-	-	0.99 J	1.5	0.59 J	-	1.7	2.5	-	-	-
total 1,2-Dichloroethene	8260B	mg/L	170	-	-	-	-	-	1.6	0.69 J	0.68 J	2.2	5.3	-	-	-
1,1-Dichloroethane	8260B	mg/L	800**	-	-	-	-	-	0.81 J	0.80 J	0.69 J	6.8	26	-	-	-
1,1,1-Trichloroethane	8260B	mg/L	200	-	-	-	-	17	-	-	-	-	-	7.9	-	-
1,2-Dichloroethane	8260B	mg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	8260B	mg/L	5	-	-	-	-	3.3	-	-	-	-	-	2.1	-	-
1,1,2-Trichloroethane	8260B	mg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	8260B	mg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-

Key: J = Parameter detected below quantitation detection limit

- = Not Detected @ Reporting Limit of 2 ug/L

S, I, & D = 27', 57' & 85' in depth Except GP-17D and GP 19D(which was at 80' due to silt at 85')

** = Region 9 Preliminary Remediation Goal

*** = no MCL established

BOLD = exceeds Maximum Contaminant Level (MCL)

Table 4-2

GROUNDWATER STABILIZATION FIELD DATA PRIOR TO GEOPROBE GROUNDWATER SAMPLE COLLECTION

10/15/2012	TIME	SC	DO	pH	ORP	Comments
GP-18 85 ft.	9:06	0.925	0.80	7.95	-342.2	
	9:11	0.912	0.48	8.40	-363.6	
	9:16	0.901	0.39	8.30	-373.4	
	9:21	0.895	0.30	8.32	-380.3	
	9:26	0.891	0.26	8.33	-388.8	
Sampled	9:28					

10/15/2012	TIME	SC	DO	pH	ORP	Comments
GP-18 57 ft.	10:00	0.923	0.14	8.52	-550.3	
	10:05	0.897	0.09	8.68	-548.1	
	10:10	0.88	0.06	8.74	-533.3	
	10:15	0.871	0.06	8.80	-522.1	
Sampled	10:17					

10/15/2012	TIME	SC	DO	pH	ORP	Comments
GP-18 27 ft.	10:45	0.929	0.11	8.69	-557.4	
	10:50	0.912	0.07	8.72	-536.0	
	10:55	0.902	0.04	8.72	-520.7	
	11:00	0.897	0.04	8.71	-508.4	*
Sampled	11:03					

10/15/2012	TIME	SC	DO	pH	ORP	Comments
GP-22 85 ft.	12:15	0.890	0.40	8.55	-477.0	
	12:20	0.880	0.06	8.62	-493.3	
	12:25	0.874	0.06	8.62	-488.3	
	12:30	0.867	0.05	8.62	-483.5	
Sampled	12:32					

10/15/2012	TIME	SC	DO	pH	ORP	Comments
GP-22 57 ft.	1:02	0.880	0.09	8.59	-519.6	
	1:07	0.873	0.07	8.73	-515.7	
	1:12	0.880	0.05	8.77	-516.8	
	1:17	0.873	0.14	8.76	-523.3	pump glitch was worked out
	1:22	0.866	0.03	8.76	-518.8	
	1:27	0.863	0.03	8.75	-516.3	
Sampled	1:29					

10/15/2012	TIME	SC	DO	pH	ORP	Comments
GP-22 27 ft.	2:00	0.727	0.94	8.54	-405.0	
	2:05	0.687	1.95	8.49	-314.3	
	2:10	0.654	3.68	8.35	-207.0	
	2:15	0.648	4.30	8.27	-178.0	
	2:20	0.645	4.69	8.22	-157.5	
	2:25	0.641	4.92	8.18	-147.0	
Sampled	2:27					

Table 4-2

GROUNDWATER STABILIZATION FIELD DATA PRIOR TO GEOPROBE GROUNDWATER SAMPLE COLLECTION

10/15/2012	TIME	SC	DO	pH	ORP	Comments
GP-08 85 ft.	3:35	0.989	0.10	9.13	-523.0	
	3:40	0.977	0.07	9.26	-516.6	
	3:45	0.970	0.06	9.20	-519.3	
Sampled	3:47					

10/16/2012	TIME	SC	DO	pH	ORP	Comments
GP-08 57 ft.	8:36	0.905	0.44	8.68	-594.0	
	8:41	0.916	0.27	8.74	-572.0	
	8:46	0.919	0.25	8.74	-553.6	
Sampled	8:48					

10/16/2012	TIME	SC	DO	pH	ORP	Comments
GP-08 27 ft.	9:15	0.689	0.74	8.65	-507.0	
	9:20	0.602	3.54	8.58	-330.0	
	9:25	0.587	5.20	8.52	-276.5	
	9:30	0.558	5.30	8.51	-280.5	Pump problem
	9:55	0.586	5.30	8.43	-240.0	
	10:00	0.572	6.68	8.37	-178.6	
	10:05	0.567	6.93	8.32	-144.2	
	10:10	0.567	6.94	8.30	-144.1	
	10:15	0.568	6.76	8.30	-155.7	
Sampled	10:17					

10/16/2012	TIME	SC	DO	pH	ORP	Comments
GP-03 85 ft.	11:32	1.023	0.15	8.78	-497.0	
	11:37	1.013	0.09	8.80	-481.0	
	11:42	1.006	0.07	8.77	-444.0	
	11:47	1.000	0.04	8.73	-438.0	
Sampled	11:49					

10/16/2012	TIME	SC	DO	pH	ORP	Comments
GP-03 57 ft.	12:40	1.022	0.20	8.96	-490.0	
	12:45	1.010	0.10	9.05	-502.0	
	12:50	1.002	0.08	9.05	-510.7	
	12:55	1.000	0.08	9.02	-513.5	
Sampled	12:57					

10/16/2012	TIME	SC	DO	pH	ORP	Comments
GP-03 27 ft.	1:30	0.750	4.55	8.65	-231.0	
	1:35	0.734	5.29	8.59	-174.0	
	1:40	0.726	5.50	8.50	-151.9	
	1:45	0.724	5.64	8.45	-143.2	
Sampled	1:47					

Table 4-2

GROUNDWATER STABILIZATION FIELD DATA PRIOR TO GEOPROBE GROUNDWATER SAMPLE COLLECTION

10/16/2012	TIME	SC	DO	pH	ORP	Comments
GP-16 85 ft.	3:00	0.902	0.24	8.00	-332.0	
	3:05	0.898	0.07	8.83	-424.7	
	3:10	0.899	0.05	8.91	-441.0	
	3:15	0.889	0.04	8.95	-452.1	
Sampled	3:17					

10/16/2012	TIME	SC	DO	pH	ORP	Comments
GP-16 57 ft.	3:40	0.913	0.14	8.85	-517.0	
	3:45	0.906	0.06	8.97	-503.3	
	3:50	0.896	0.04	8.98	-478.4	
	3:55	0.890	0.02	9.97	-476.8	
Sampled	3:57					

10/16/2012	TIME	SC	DO	pH	ORP	Comments
GP-16 27 ft.	4:20	0.786	0.16	8.81	-415.0	
	4:25	0.758	0.62	8.74	-340.2	
	4:30	0.745	1.57	8.64	-265.7	
	4:35	0.740	1.95	8.57	-245.0	
	4:40	0.736	2.38	8.50	-204.0	
	4:45	0.731	2.81	8.43	-160.0	
	4:50	0.729	2.98	8.38	-148.7	
	4:55	0.727	3.22	8.35	-134.2	
Sampled	4:57					

10/17/2012	TIME	SC	DO	pH	ORP	Comments
GP-17 80 ft.	9:55	0.884	0.38	8.87	-475.0	Sampling tube block w/ sediment
	10:00	0.891	0.24	8.96	-470.0	pulled rods up to 80 ft.
	10:05	0.880	0.24	8.97	-461.0	
	10:10	0.869	0.26	8.98	-448.9	
Sampled	10:12					

10/17/2012	TIME	SC	DO	pH	ORP	Comments
GP-17 57 ft.	10:30	0.910	0.17	8.86	-480.0	
	10:35	0.912	0.10	8.95	-482.0	
	10:40	0.902	0.08	8.98	-487.7	
	10:45	0.895	0.06	8.99	-484.9	
Sampled	10:47					

10/17/2012	TIME	SC	DO	pH	ORP	Comments
GP-17 27 ft.	11:00	0.812	0.18	8.90	-480.0	
	11:05	0.760	0.59	8.80	-380.0	
	11:10	0.739	0.85	8.80	-364.0	
	11:15	0.728	1.25	8.73	-312.9	
	11:20	0.726	1.22	8.68	-313.6	
	11:25	0.727	0.94	8.69	-328.2	
Sampled	11:27					

Table 4-2

GROUNDWATER STABILIZATION FIELD DATA PRIOR TO GEOPROBE GROUNDWATER SAMPLE COLLECTION

10/17/2012	TIME	SC	DO	pH	ORP	Comments
GP-19 80 ft.	12:57	0.980	0.12	8.72	-470.0	Sampling tube block w/ sediment
	1:02	0.947	0.08	8.76	-431.0	pulled rods up to 80 ft.
	1:07	0.933	0.08	8.71	-394.0	
	1:12	0.926	0.08	8.64	-357.0	
	1:17	0.925	0.08	8.59	-332.3	
	1:22	0.925	0.06	8.54	-320.2	
Sampled	1:24					

10/17/2012	TIME	SC	DO	pH	ORP	Comments
GP-19 57 ft.	1:57	0.955	0.20	8.70	-485.0	
	2:02	0.947	0.18	8.78	-434.1	
	2:07	0.940	0.28	8.72	-410.0	
	2:12	0.964	0.36	8.66	-388.0	
	2:17	0.931	0.41	8.63	-388.2	
	2:22	0.928	0.36	8.64	-398.3	
Sampled	2:24					

10/17/2012	TIME	SC	DO	pH	ORP	Comments
GP-19 27 ft.	2:45	0.800	0.08	8.80	-550.0	
	2:50	0.713	0.12	8.80	-494.0	
	2:55	0.647	0.54	8.68	-406.3	
	3:00	0.623	1.67	8.61	-330.0	
	3:05	0.613	2.80	8.51	-265.0	
	3:10	0.607	3.24	8.43	-205.0	
	3:15	0.600	3.82	8.37	-156.7	
	3:20	0.596	4.33	8.32	-121.0	
	3:25	0.594	4.61	8.30	-114.8	
Sampled	3:27					

10/17/2012	TIME	SC	DO	pH	ORP	Comments
GP-20 85 ft.	4:50	1.052	0.12	8.85	-525.0	
	4:55	1.035	0.05	8.86	-519.0	
	5:00	1.029	0.03	8.85	-512.0	
	5:05	1.025	0.03	8.84	-509.2	
Sampled	5:07					

10/18/2012	TIME	SC	DO	pH	ORP	Comments
GP-20 57 ft.	8:15	0.971	1.04	8.80	-460.0	
	8:20	0.972	0.76	8.83	-435.0	
	8:25	0.972	0.55	8.85	-420.0	
	8:30	0.972	0.44	8.70	-290.0	
	8:35	0.971	0.41	8.72	-290.0	
	8:40	0.971	0.36	8.67	-247.0	
Sampled	8:42					

Table 4-2

GROUNDWATER STABILIZATION FIELD DATA PRIOR TO GEOPROBE GROUNDWATER SAMPLE COLLECTION

10/18/2012	TIME	SC	DO	pH	ORP	Comments
GP-20	9:00	1.004	0.16	8.94	-485.0	
27 ft.	9:05	1.021	0.37	8.94	-453.0	
	9:10	1.022	0.52	8.94	-420.0	
	9:15	1.020	0.73	9.91	-409.4	
	9:20	1.018	0.65	8.91	-406.4	
	9:25	1.016	0.67	8.90	-401.9	
Sampled	9:27					

ATTACHMENT 1

**PLOTS (DATA & GRAPHS) OF VOC CONCENTRATIONS IN RCRA MONITORING
WELLS WHERE MAXIMUM CONTAMINANT LEVELS WERE EXCEEDED**

CENTRAL WIRE UNION, IL

ATTACHMENT 1 CONTENTS

TRENDS IN VOC CONCENTRATIONS IN THE RCRA MONITORING WELLS WHERE THE MAXIMUM CONTAMINANT LEVELS WERE EXCEEDED

CENTRAL WIRE UNION, IL

- FIGURE 1 MONITORING WELL MW-2, 1995 – 2013
- FIGURE 2 MONITORING WELL MW-4, 1995 – 2013
- FIGURE 3 MONITORING WELL MW-5, 1995 – 2013
- FIGURE 4 MONITORING WELL MW-5D, 1995 – 2013
- FIGURE 5 MONITORING WELL MW-6, 1995 – 2013
- FIGURE 6 MONITORING WELL MW-7, 1995 – 2013
- FIGURE 7 MONITORING WELL MW-8, 1995 – 2013
- FIGURE 8 MONITORING WELL MW-9, 1995 – 2013
- FIGURE 9 MONITORING WELL MW-HBR (HIGHBRIDGE RD.), 1995 – 2013
- FIGURE 10 MONITORING WELL DGW-1I, 1998 – 2013
- FIGURE 11 MONITORING WELL DGW-1D, 1998 – 2013

MW-2

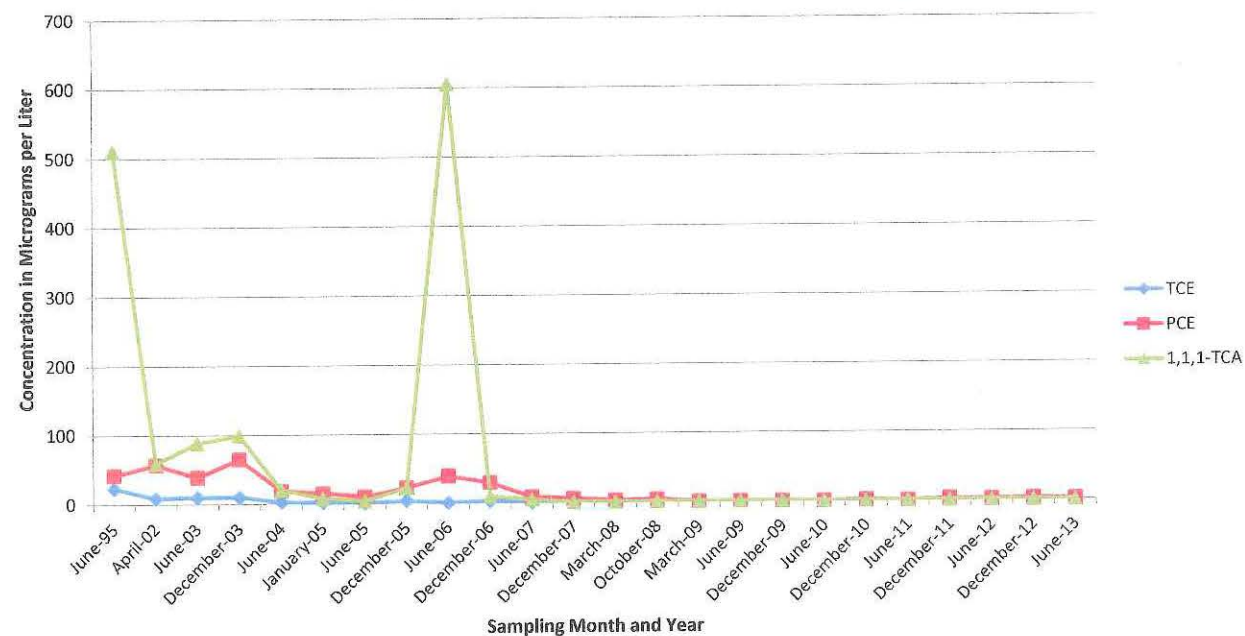
Date	TCE	PCE	1,1,1-TCA
June-95	23	42	510
April-02	8.2	57	59
June-03	9.5	39	88
December-03	9.9	65	99
June-04	2.5	19	20
January-05	1.4	15	7.7
June-05	0	10	3.3
December-05	3.05	22.3	21.8
June-06	0	39	605
December-06	1.8	29	8.8
June-07	0	7.9	3.9
December-07	1.5	5.3	0
March-08	0	2.1	0
October-08	0	3.4	0
March-09	0	0	0
June-09	0	0	0
December-09	0	0	0
June-10	0	0	0
December-10	0	1.3	0
June-11	0	0	0
December-11	0	1.7	0
June-12	0	1.3	0
December-12	0.5	2	0
June-13	0	1.1	0
MCL	5	5	200

Concentrations reported in micrograms per liter.

Bold values exceed the MCL.

EPA Method 8260B was run. Only chemicals with detections above the MCLs were plotted.

Figure 1
Trends in VOC Concentrations at the Central Wire Union, Illinois Plant for Parameters Exceeding the MCLs in Monitoring Well MW-2, 1995 - 2013



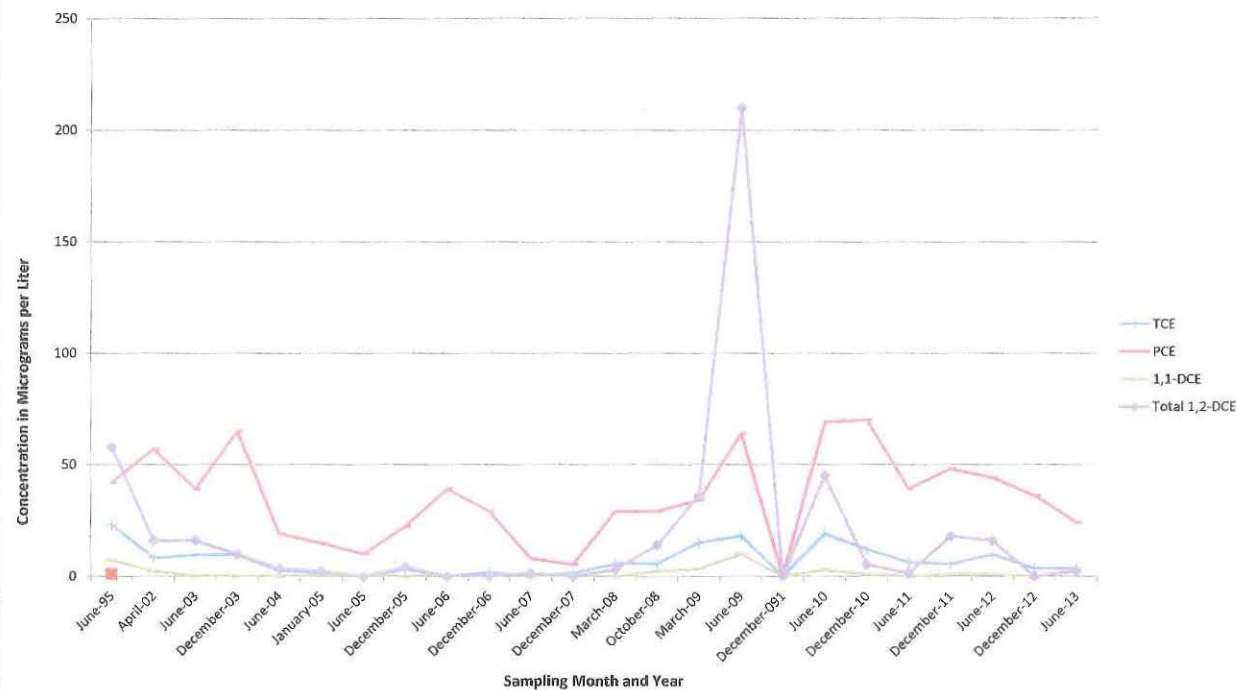
MW-4

Time	TCE	PCE	1,1-DCA	Total 1,2-DCE
June-95	23	42	7	58
April-02	8.2	57	2.3	16
June-03	9.5	39	0	16
December-03	9.5	65	0	9.8
June-04	2.5	19	0	3.5
January-05	1.4	15	0	2.3
June-05	0	10	0	0
December-05	3.05	22.3	0	4.31
June-06	0	39	0	0
December-06	1.8	29	0	0
June-07	0	7.9	0	1.3
December-07	1.5	5.3	0	0
March-08	5.5	29	0	3
October-08	5.5	29	2.2	14
March-09	15	34	3.4	36
June-09	18	64	9.9	210
December-09 ¹	0	0	0	0
June-10	19	69	3	45
December-10	12	70	0.99	5.3
June-11	6.3	39	0	1.5
December-11	5.5	48	1	18
June-12	9.7	44	0.94	16
December-12	3.5	36	0	0
June-13	3.6	24	2.3	2.4
MCL	5	5	7	170

¹ Well not found under snow

Concentrations reported in micrograms per liter.
 Bold values exceed the MCL.
 EPA Method 8260B was run. Only chemicals with
 detections above the MCLs were plotted.
 June-95 data was not plotted due to large value.

Figure 2
Trends in VOC Concentrations for Parameters Exceeding MCLs
in Monitoring Well MW-4, 1995 - 2013



MW-5

	TCA	TCE	PCE	DCE
June-95	4000	150	650	230
April-02	300	5	94	12
June-03	360	10	190	5
December-03	330	7.5	210	1.8
June-04	150	4.7	170	0
January-05	160	5.1	190	0
June-05	120	4.9	190	0
December-05	93.2	4.63	133	1.64
June-06	78	4.7	120	0
December-06	82	4	160	0
June-07	0	4.5	150	5.7
December-07	0	4.6	130	1.1
March-08	58	3.8	160	0
October-08	45	3.1	110	0
June-09	51	3.5	140	1.8
December-09	31	2.7	140	0
June-10	46	3.6	100	0.98
December-10	37	3.2	130	1.5
June-11	42	2.6	110	0.77
December-11	36	2.5	98	0
June-12	49	4.2	120	0.77
December-12	29	2.6	110	0.94
June-13	29	2.4	86	0
MCL	200	5	5	7

Concentrations reported in micrograms per liter.

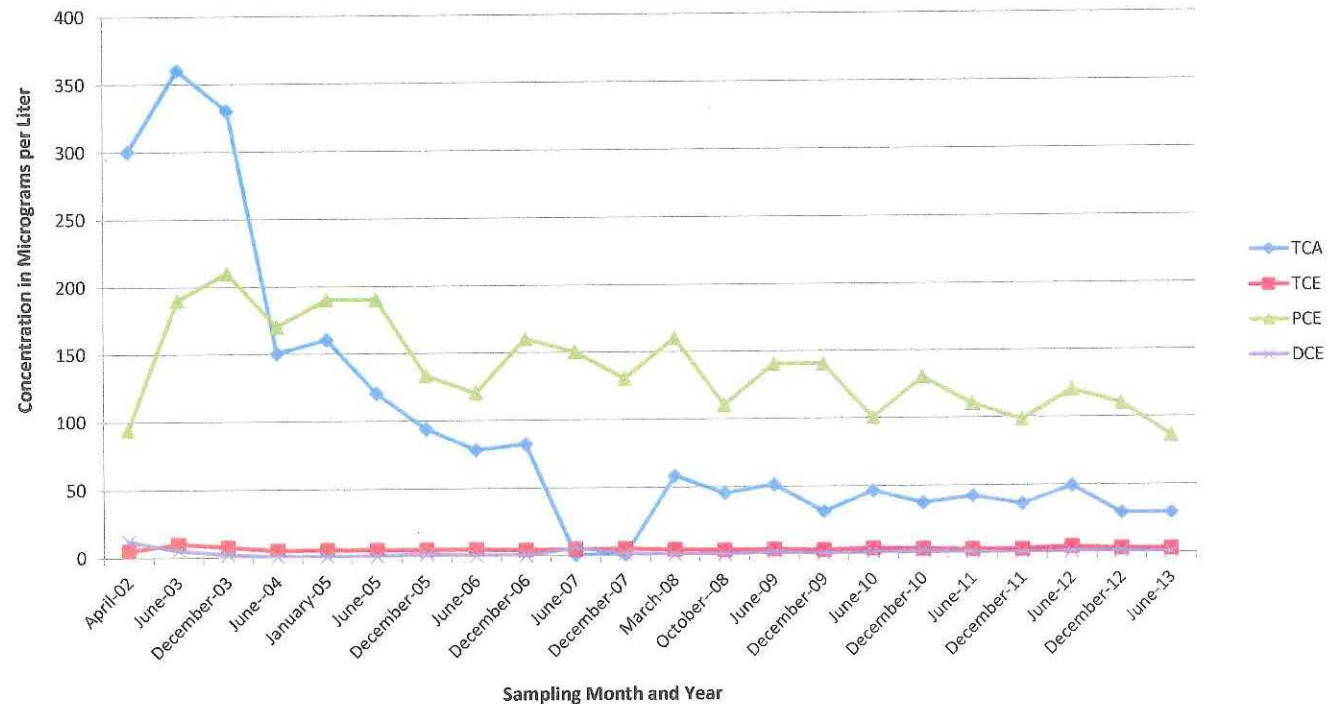
Bold values exceed the MCL.

EPA Method 8260B was run. Only chemicals with detections above the MCLs were plotted.

June-95 data was not plotted due to large value.

Figure 3

Trends in VOC Concentrations at the Central Wire Union, Illinois Plant for Parameters Exceeding the MCLs in Monitoring Well MW-5 from 2002 - 2013

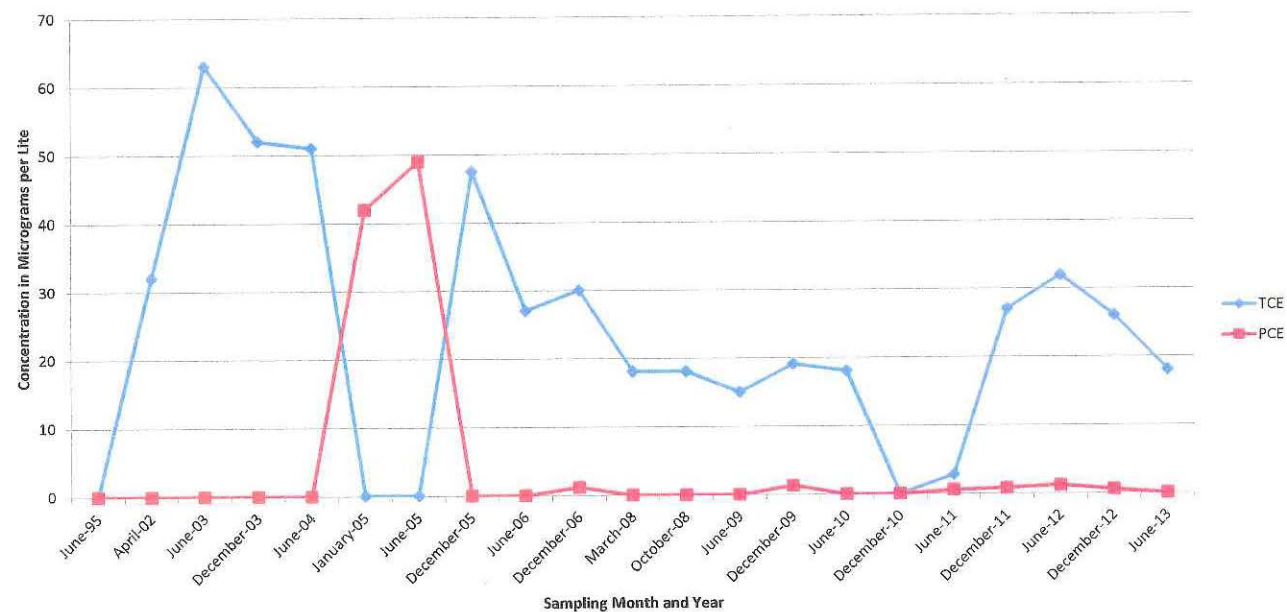


MW-5D

Time	TCE	PCE
June-95	0	0
April-02	32	0
June-03	63	0
December-03	52	0
June-04	51	0
January-05	0	42
June-05	0	49
December-05	47.5	0
June-06	27	0
December-06	30	1.2
March-08	18	0
October-08	18	0
June-09	15	0
December-09	19	1.3
June-10	18	0
December-10	0	0
June-11	2.8	0.57
December-11	27	0.79
June-12	32	1.2
December-12	26	0.56
June-13	18	0
MCL	5	5

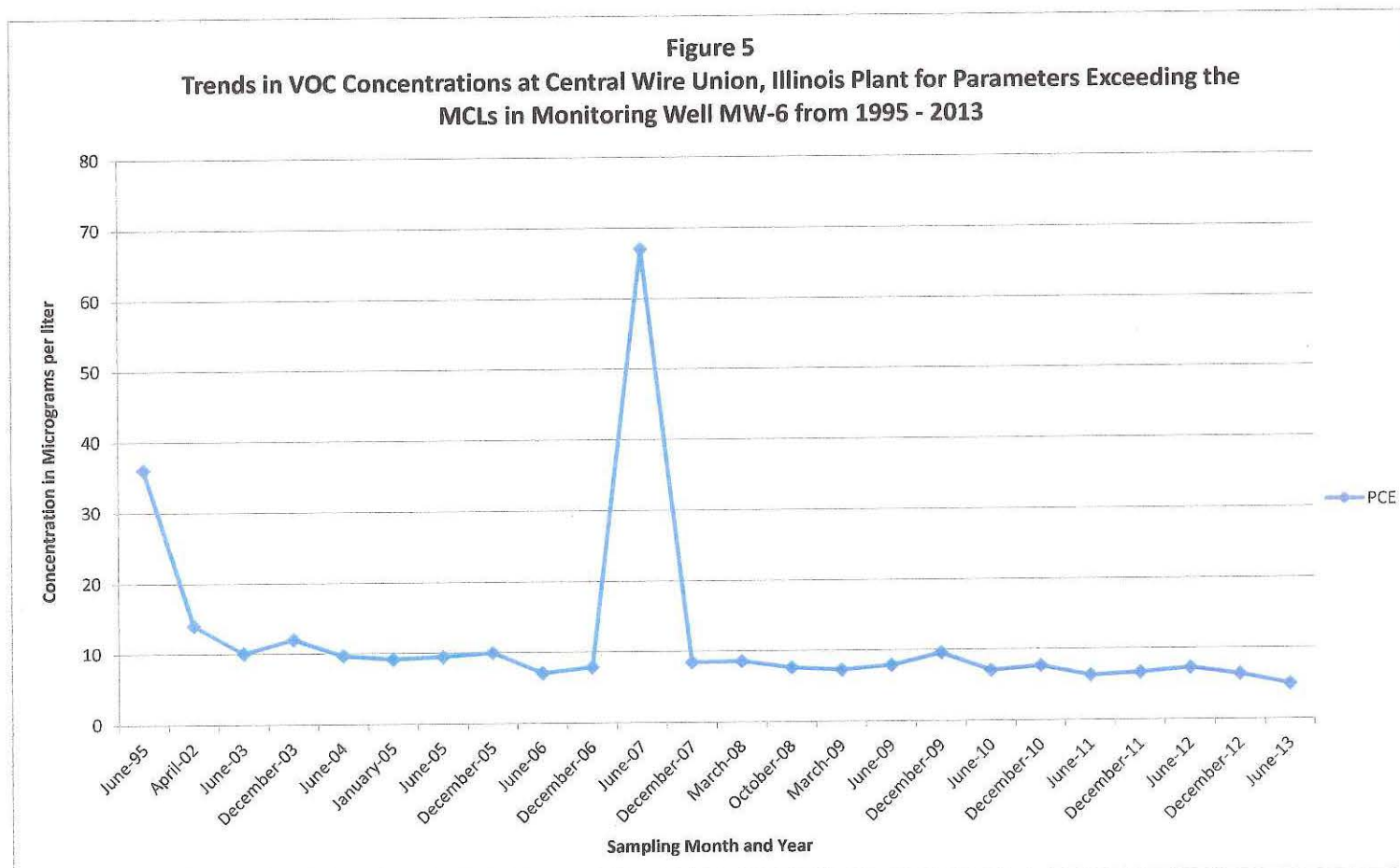
Concentrations reported in micrograms per liter.
 Bold values exceed the MCL.
 EPA Method 8260B was run. Only chemicals with
 detections above the MCLs were plotted.

Figure 4
 Trends in VOC Concentrations at the Central Wire Union, Illinois Plant for Parameters Exceeding the MCLs in Monitoring Well
 MW-5D from 1995 - 2013



MW-6	
Time	PCE
June-95	36
April-02	14
June-03	10
December-03	12
June-04	9.6
January-05	9.1
June-05	9.4
December-05	9.91
June-06	7
December-06	7.8
June-07	67
December-07	8.4
March-08	8.5
October-08	7.54
March-09	7.2
June-09	7.8
December-09	9.5
June-10	7
December-10	7.6
June-11	6.2
December-11	6.6
June-12	7.2
December-12	6.3
June-13	4.9
MCL	5

Concentrations reported in micrograms per liter.
 Bold values exceed the MCL.
 EPA Method 8260B was run.
 Only chemicals with detections above the MCLs were plotted.



MW-7

Time	TCE	PCE	1,1-DCE
June-95	64	150	130
April-02	33	84	22
June-03	63	140	11
December-03	56	200	5.5
June-04	34	160	2.3
January-05	19	180	1.9
June-05	15	140	0
December-05	16	140	1.45
June-06	10	150	0
December-06	9	200	0
March-07	7.5	180	0
June-07	7.2	170	1.1
September-07	6.2	110	0
December-07	8.9	110	1.2
March-08	6	110	0
October-08	4.8	93	4.3
March-09	6.5	80	8.8
June-09	5.9	82	2.4
December-09	7.2	9.4	7.5
June-10	4.8	60	4.8
December-10	5.9	76	11
June-11	2.8	0.57	4.6
December-11	5.7	61	3
June-12	6.5	67	7
December-12	5.6	63	1.4
June-13	3.5	46	0

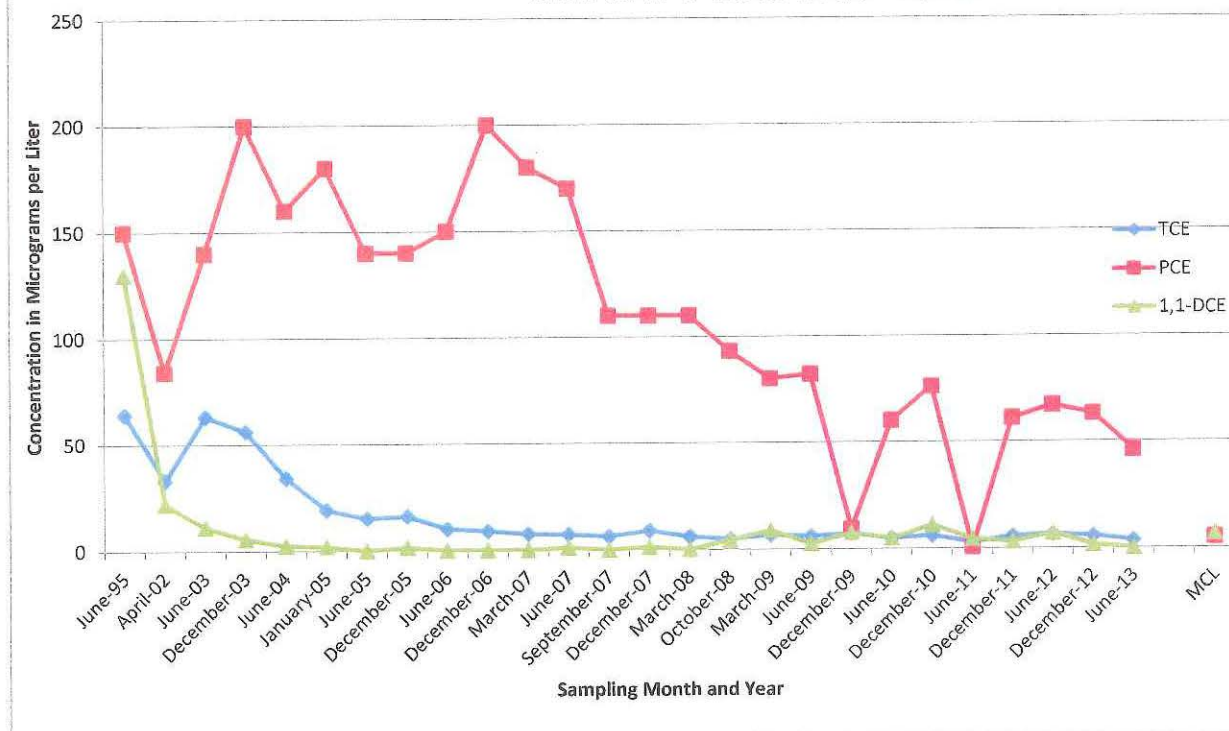
MCL	5	5	7
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Concentrations reported in micrograms per liter.

Bold values exceed the MCL.

EPA Method 8260B was run. Only chemicals with detections above the MCLs were plotted.

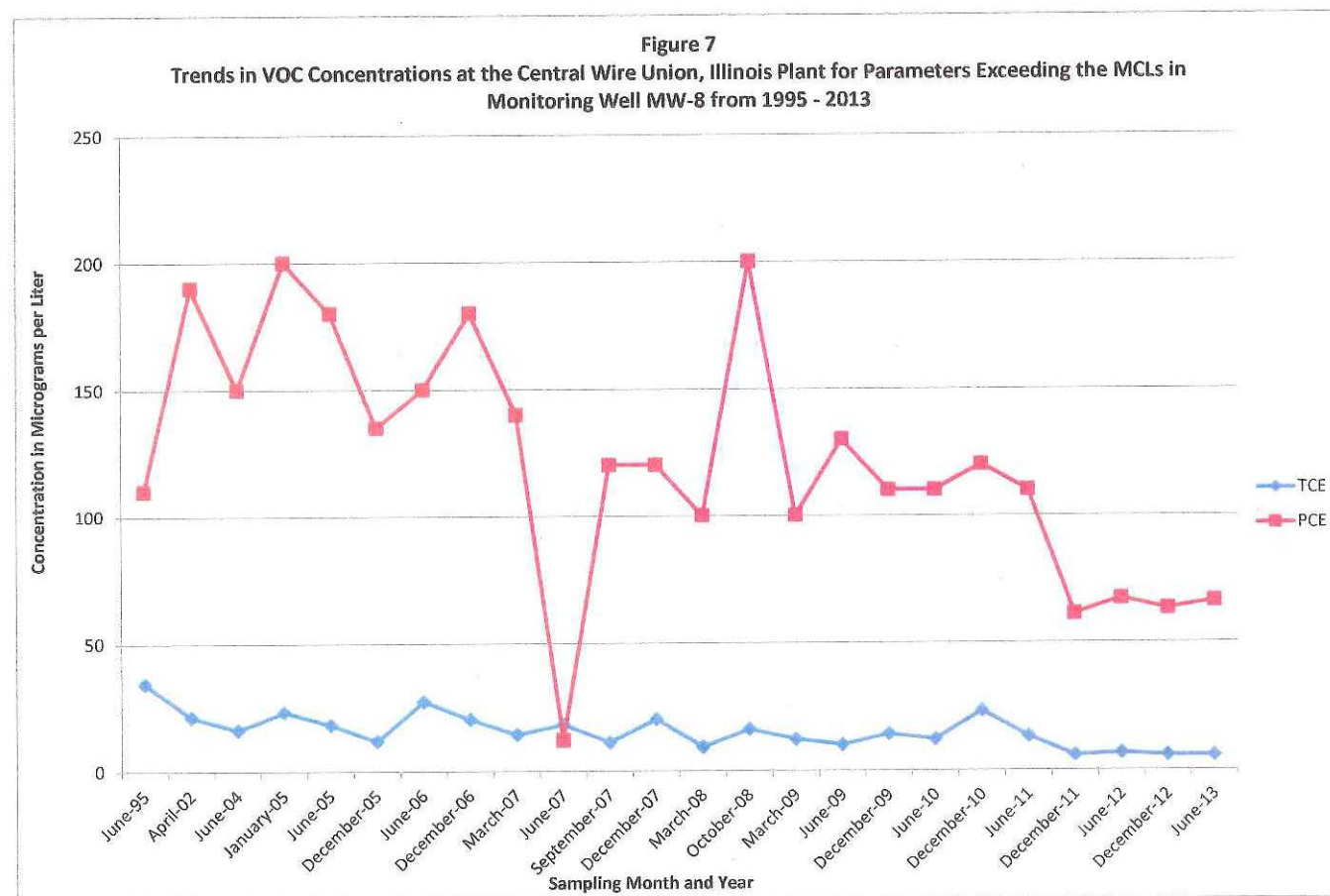
Figure 6
Trends in VOC Concentrations at the Central Wire Union,
Illinois Plant for Parameters Exceeding the MCLs in Monitoring
Well MW-7 from 1995 - 2013



MW-8

Time	TCE	PCE
June-95	34	110
April-02	21	190
June-04	16	150
January-05	23	200
June-05	18	180
December-05	11.6	135
June-06	27	150
December-06	20	180
March-07	14	140
June-07	18	12
September-07	11	120
December-07	20	120
March-08	9.1	100
October-08	16	200
March-09	12	100
June-09	9.9	130
December-09	14	110
June-10	12	110
December-10	23	120
June-11	13	110
December-11	5.7	61
June-12	6.5	67
December-12	5.6	63
June-13	5.5	66
MCL	5	5

Concentrations reported in micrograms per liter.
 Bold values exceed the MCL.
 EPA Method 8260B was run. Only chemicals with
 detections above the MCLs were plotted.

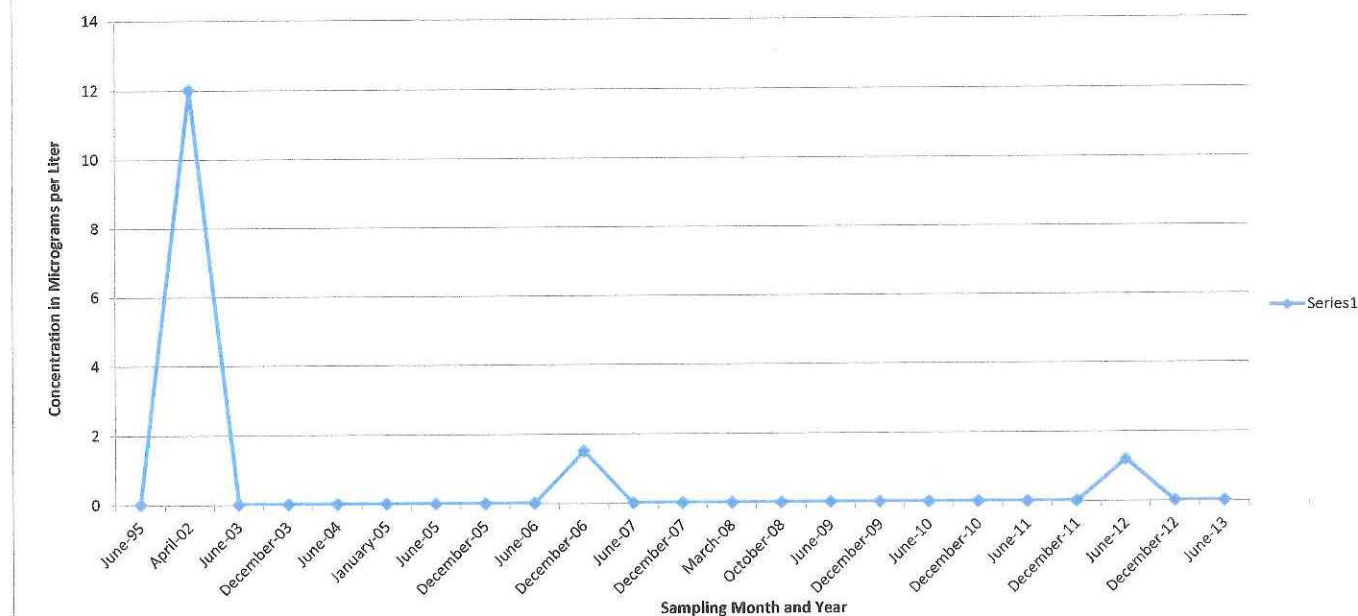


MW-9

Time	PCE
June-95	0
April-02	12
June-03	0
December-03	0
June-04	0
January-05	0
June-05	0
December-05	0
June-06	0
December-06	1.5
June-07	0
December-07	0
March-08	0
October-08	0
June-09	0
December-09	0
June-10	0
December-10	0
June-11	0
December-11	0
June-12	1.2
December-12	0
June-13	0
MCL	5

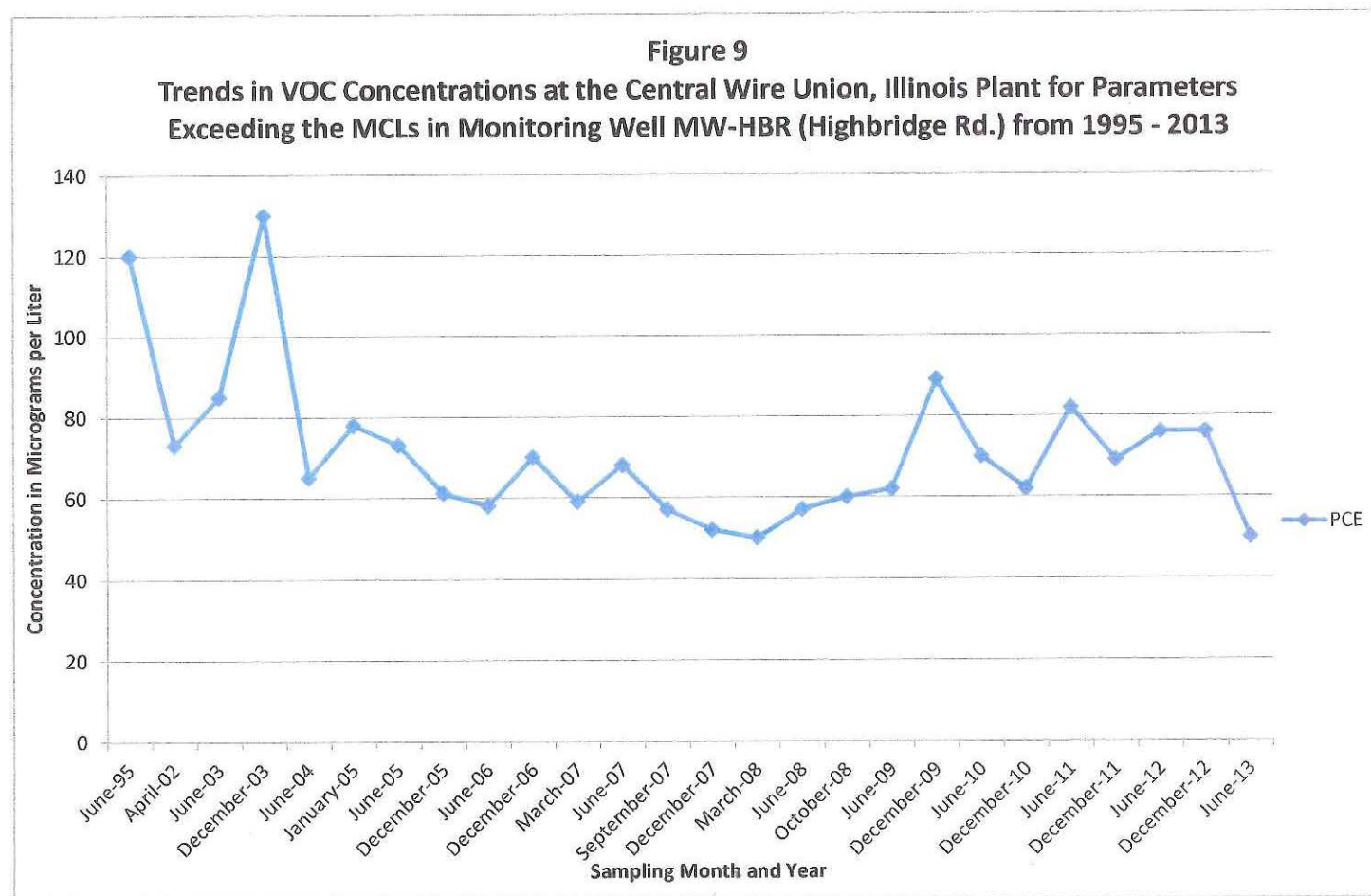
Concentrations reported in micrograms per liter.
 Bold values exceed the MCL.
 EPA Method 8260B was run. Only chemicals with
 detections above the MCLs were plotted.

Figure 8
Trends in VOC Concentrations at the Central Wire Union, Illinois Plant for
Parameters Exceeding the MCLs in Monitoring Well MW-9 from 1995 - 2013



MW-HBR

Date	PCE
June-95	120
April-02	73
June-03	85
December-03	130
June-04	65
January-05	78
June-05	73
December-05	61.1
June-06	58
December-06	70
March-07	59
June-07	68
September-07	57
December-07	52
March-08	50
June-08	57
October-08	60
June-09	62
December-09	89
June-10	70
December-10	62
June-11	82
December-11	69
June-12	76
December-12	76
June-13	50
MCL	5

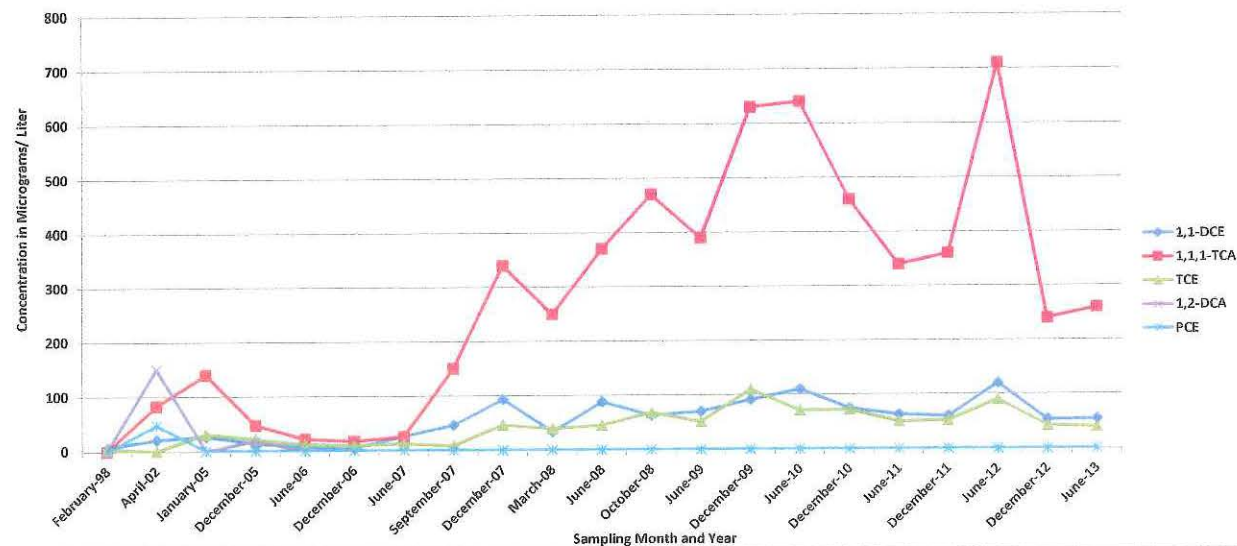


Concentrations reported in micrograms per liter.
 Bold values exceed the MCL.
 EPA Method 8260B was run. Only chemicals with
 detections above the MCLs were plotted.

DGW-1I					
Time	1,1-DCE	1,1,1-TCA	TCE	1,2-DCA	PCE
February-98	6	0	4	0.6	0
April-02	21	83	9.1	150	47
January-05	26	140	31	0	0
December-05	13.6	47.2	21.6	18.4	0
June-06	6.9	22	12	0	0
December-06	4.6	18	9.7	0	0
June-07	26	26	13	0	0
September-07	46	150	8.9	0	0
December-07	93	340	46	0	0
March-08	33	250	39	0	0
June-08	88	370	46	0	0
October-08	63	470	68	0	0
June-09	70	390	51	0	0
December-09	91	630	110	0	0
June-10	110	640	71	0	0
December-10	75	460	72	0	0
June-11	63	340	50	0	0
December-11	60	360	52	0	0
June-12	120	710	90	0	0
December-12	53	240	42	0	0
June-13	54	260	39	0	0
MCL	7	200	5	5	5

Concentrations reported in micrograms per liter.
 Bold values exceed the MCL.
 EPA Method 8260B was run. Only chemicals with
 detections above the MCLs were plotted.

Figure 10
 Trends in VOC Concentrations at the Central Wire Union, Illinois Plant for Parameters Exceeding the MCLs in
 Monitoring Well DGW-1I from 1998 - 2013



DGW-1D

Time	1,1-DCE	1,2-DCA	TCE	VC
February-98	4	0	4	0
April-02	24	0	9	0
June-05	88	2.5	31	0
December-05	98.4	5.5	21.6	0
June-06	93	7.46	12	0
December-06	68	6.2	9.7	0
June-07	87	6	13	0
September-07	90	4.4	8.9	0
December-07	67	4.3	46	0
March-08	66	2.8	39	0
June-08	31	2.2	45	0
October-08	24	0	68	0
June-09	8.2	1.7	51	0
December-09	16	2	110	0
June-10	8.1	1.5	71	0
December-10	12	1.8	72	0
June-11	43	2.9	50	0
December-11	23	2.4	52	0
June-12	10	2.4	90	0
December-12	36	6.2	42	0
June-13	2.6	0	0.67	8.1
MCL	7	5	5	2

Concentrations reported in micrograms per liter.

Bold values exceed the MCL.

EPA Method 8260B was run. Only chemicals with detections above the MCLs were plotted.

Figure 11
Trends in VOC Concentrations at the Central Wire Union, Illinois Plant for
Parameters Exceeding the MCLs in Monitoring Well DGW-1D from
1998 - 2013

